



State Archives: Limited Space for a Growing Collection

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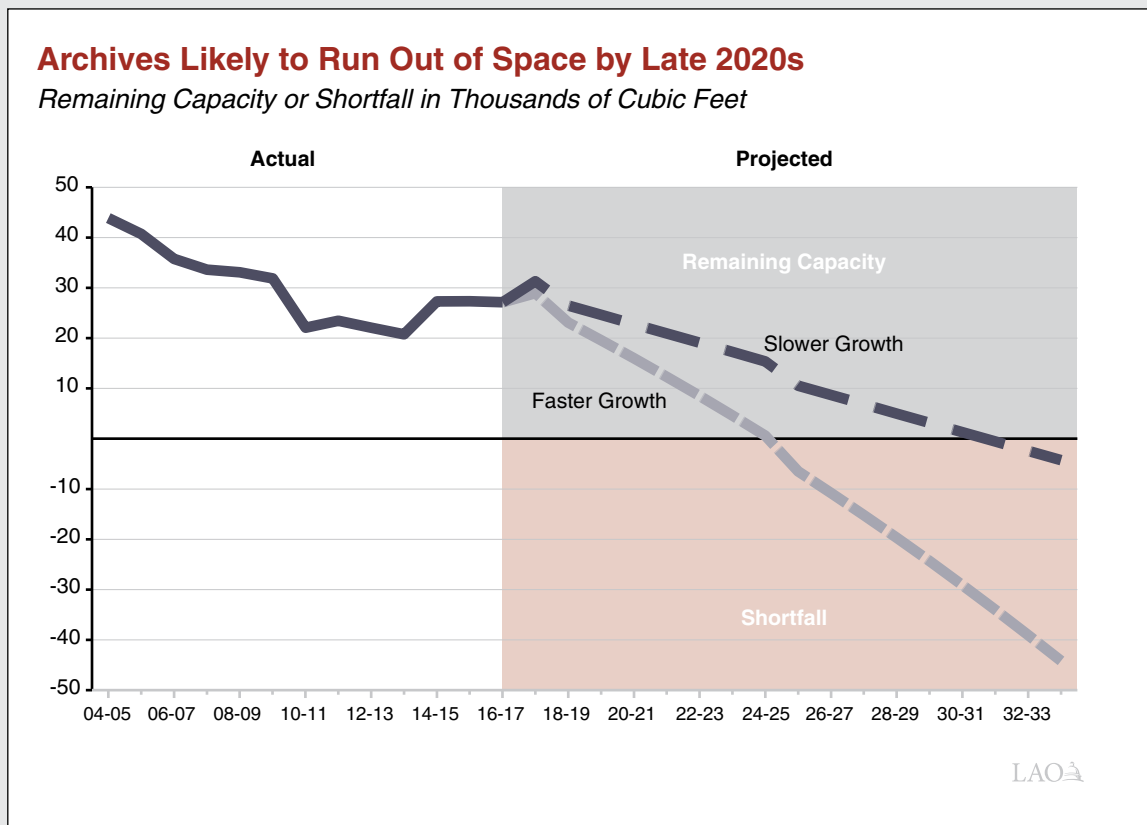
Executive Summary

State Archives Holds Record of Government. The State Archives—a part of the Secretary of State’s Office—preserves state government records of historical significance. Its large collection includes both physical and digital records. The collection grows annually.

Current Facility Will Run Out of Space in the Coming Years. Under current practices, the State Archives will eventually run out of space for storing physical records. In this report, we examine two scenarios for the growth of the State Archives’ collection: a fast-growth and a slow-growth scenario, as summarized in the figure below. We conclude the State Archives’ capacity will be exhausted at some point within the next 15 years.

Key Decision Point on Future Course of the Archives. In the coming few years the Legislature’s decisions will determine how the state retains records for decades to come. In setting state policy for the future of the State Archives, the Legislature could:

- **Increase Physical Capacity.** This alternative would keep archival practices similar to the status quo. Increasing physical storage capacity would require the state to begin a planning process within the next few years.



- **Increase Digital Capacity.** This alternative would require the Legislature to direct the State Archives to rely principally on digital records in the future. The State Archives would, as part of its record management process, direct departments to transmit records with archival value digitally. The digital alternative could limit or delay the need for a new building, but would involve changes in state processes and new information technology systems.

Recommend Legislature Decide on Future of Archival Practices. We recommend the Legislature decide over the next few years on its preferred direction for future archival practices: increased physical capacity or increased digital capacity. After deciding which alternative to pursue, we recommend the Legislature direct the administration to produce a report that describes the costs and benefits of options for the selected alternative. We note that the longer the Legislature waits to make a decision on this policy, the more likely it seems the Archives will require additional building space for incoming physical records.

INTRODUCTION

California's first legislative session took place in San Jose from December 1849 to April 1850. In this session, the Legislature established the State Archives as part of the Secretary of State's Office under California's first chaptered law (Chapter 1, Statutes of 1850). Today, the State Archives collects, catalogs, preserves, and provides public access to state government records with historical significance. These records are collected from the Legislature, the State Supreme Court and Courts of Appeal, the Governor's Office, and state departments (including boards and commissions). Through the preservation of these records, the State Archives maintains the legal history of state government.

In this report, we describe the State Archives' current capacity and discuss alternatives to address limited space. First, we provide background on the State Archives' collection and the process for archiving records. We then provide estimates of the State Archives' available space for archived records, noting that if current practices continue, the State Archives is likely to run out of space within the next 15 years. Last, we outline two possible courses of action that the Legislature could take to address the future shortfall. We recommend the Legislature determine a course of action and then direct the administration to report on the costs and benefits of potential options for the selected alternative.

STATE ARCHIVES COLLECTION

All entities of state government—including the Legislature, courts, the Governor's office, departments, boards, and commissions—create records as part of everyday government work. Any product that a government entity produces is considered a government record, although not all records have historical value. Any records with historical value should eventually be archived—in other words, permanently preserved in the collection of the State Archives. This section describes the records included in the State Archives' collection.

Physical Records

Collection Includes Many Physical Records.

The State Archives has records dating back to the late 1700s. The collection now has over 122,000 cubic feet of physical records, which would fill about 35 semi-trucks. Physical records take different forms, including: printed documents (such as memos, letters, court documents, minutes from meetings, and inmate records), maps (for example, maps of land grants established before California joined the United States), photographs, blueprints, and artifacts that have historical significance.

Digital and Digitized Records

Over the last decade, the State Archives has begun archiving digital records. The State Archives holds two

types of digital records: records that were originally created in a digital format and physical records that are "digitized."

50 Terabytes (TB) of Digital Records. Digital records are those that were created, stored, and transmitted to the State Archives in an electronic format. For example, an e-mail, text file, spreadsheet, or other file created and saved on a computer is a digital record. The State Archives holds about 50 TB of digital records—roughly enough data to fill 68,000 standard CD-ROMs. As state government entities increasingly use digital formats to store and communicate information, the State Archives has collected more digital records.

10 TB of Digitized Records. Physical records—including paper and three-dimensional artifacts—can be digitized by capturing an image of the record using specialized scanners and cameras. The State Archives' collection includes about 10 TB of digitized records. In general, the State Archives digitizes physical records to preserve frequently accessed records or to make a record of broad interest accessible to the public online. For example, the State Archives has an online collection of digitized 19th century trademarks registered under California's Trademark Registration Act of 1863 (ten years before federal trademark legislation). Once a physical record is digitized, the State Archives generally

retains the original physical record. In other words, the digitized record does not take the place of the physical document. Digitization requires resources and time, and so the State Archives has been able to digitize only a small number of select records in its collection.

Public-Private Digitization Partnerships. Many government archives around the world, including national archives—for example, the one in the United Kingdom—digitize records in house. In the United States, however, it is common for government archives—including the National Archives and the State Archives—to rely on public-private partnerships for such efforts, thereby limiting increases in government costs. Examples of private entities which have partnerships with the State Archives are:

- **Ancestry.com.** Many State Archives records—including prison records and Spanish land grants—are of interest to genealogists. Ancestry.com, a subscription service for family history research, has

digitized many records that it sees as marketable to genealogists. The State Archives also has a similar relationship with FamilySearch, a nonprofit genealogy research organization. FamilySearch has duplicated State Archives records on microfilm. In the future, FamilySearch may digitize records and make them available online.

- **The Google Cultural Institute.** The Google Cultural Institute makes select State Archives' digitized records available online. The State Archives selects and digitizes records—photographs, posters, documents, and other records—associated with a common theme. Digitized records are posted on a Google website as an online exhibit accompanied with narrative text discussing the record's place in California history. Currently, there are 11 such exhibits covering topics like California's Franciscan missions, the state's involvement in World War I, and a history of the California Legislative Black Caucus.

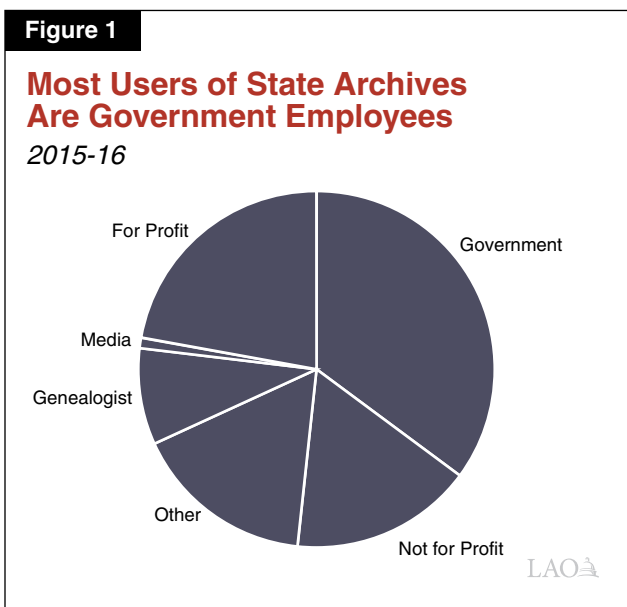
STATE ARCHIVES USE

State Archives Is Open to the Public. The State Archives is open to all members of the public. People can access physical and digital records at the State Archives with the assistance of reference staff. Users can either visit the State Archives' collection in person in Sacramento or access records remotely via e-mail, fax, or mail.

Access to Digital Records. Most of the State Archives' digital records are not publicly accessible online. As a result, users must adhere to the same process to access digital records as they do for physical records. That is, they must visit the collection in person or correspond with reference staff remotely. A small portion of records digitized by public-private partnerships are publicly available online, but with certain conditions. Records digitized for Google are only available through the Google Cultural Institute website (the State Archives' website provides a link for access). Only people paying for an Ancestry.com subscription can access and search the Ancestry.com records from a personal computer. Members of the public can visit the State Archives and view these digitized records on the agency's computers.

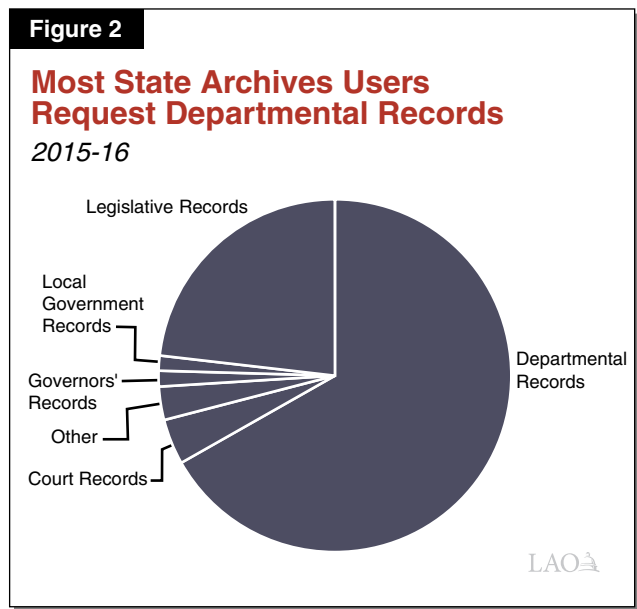
Largely Accessed by Government Employees.

Government employees—including those who work for state departments, the Legislature, courts, the federal government, and local government entities—make up the largest share of people that use the State Archives. As **Figure 1** shows, more than one-third of



people who used the State Archives in 2015-16 (the most recent year for which data are available) were government employees. The second largest share of users are for profit entities, which includes research services, copy services, private law firms, and other for profit businesses. The nearby box describes how government employees, or other individuals, might use records at the State Archives.

Departmental Records Are Most Commonly Accessed Records. Most of the records at the State Archives come from state departments. **Figure 2** shows the most frequently requested records are those from state departments—accounting for nearly 70 percent of the records accessed. Among departments, the California Department of Corrections and Rehabilitation (CDCR) records are the most commonly used, accounting for 16 percent of total departmental records accessed. An example of a type of record that often is requested from CDCR is an inmate case file. These files include information about individuals who were incarcerated by the state and are permanently stored



in the State Archives after CDCR maintains them for 25 years. These records often are accessed by genealogists seeking insight into a family's history.

LIFE CYCLE OF A RECORD

In this section, we discuss the State Archives' process for determining which records are archived and the process for archiving them. First, we describe the criteria the State Archives uses to determine which departmental records should be archived and which should be destroyed. Then, we describe the process by which departmental records are archived. Last, we discuss the process for archiving records from other entities, including the Legislature, courts, and the Governor's Office.

Criteria for Determining Archival Value of Departmental Records

Only Records With Archival Value Are Permanently Preserved. A department's record—either physical or digital—is only archived if it has “archival value.” Archival value means that a record has enough historical significance for state government to be permanently included in the State Archives' collection. The vast majority of records created by

How Are Records at the State Archives Used?

A state employee might access past records at the State Archives to inform governmental decisions and actions under consideration today. For example, an employee of a state board might refer to records at the State Archives related to a past board action—including minutes from the meeting where a decision was made or related correspondence—to understand the context of an issue being considered by the board today. In addition to government employees, it is common for private law firms and other for profit entities to use the State Archives on behalf of their clients. For example, a law firm might use court or legislative records held by the State Archives to research legal precedents, legislative intent, or the history of a law.

departments are not considered to have archival value and are destroyed.

Archival Value Is Determined by Policies and Professional Standards. The State Records Appraisal Program Unit (part of the State Archives) determines which records have archival value. To make this determination, staff rely on internal collection management policies and archivist professional standards. In general, records are archived if they:

- **Have Research Value.** The State Archives keeps records with current or future research value. For example, information on bills (such as written testimony and analysis) have research value for those in the legal profession seeking to interpret the law.
- **Document a Policy Decision.** Consistent with its mission, the State Archives includes in the collection any record that provides insight into how a policy decision was made. For example, board meeting minutes are archived because they serve as a record and reference of board decisions.
- **Have Been Collected in the Past.** The State Archives will keep a record if it is typical of the type of records that have been previously collected. For example, the State Archives has historically collected books with CDCR inmate “mug shot” photos and continues to do so.

Process for Archiving Departmental Records

Below, we describe the process by which departmental records are archived. (This process applies to both physical and digital records.) First, we describe record management decisions made by departments. Then, we discuss the common storage options departments use for records before they are sent to the State Archives or destroyed. The process described below refers to both digital and physical records unless otherwise noted.

Departments Create Records Every Day.

Departmental staff create records every day as a part of daily work. In any given day, a government employee may send multiple e-mails, draft a memo with implications for future decisions, or record a public meeting with typed minutes. Each of these (e-mails,

memos, and meeting minutes) is a common example of a record. In fact, anything a department produces is considered a record of government. Records can be formal government documents such as published reports, signed letters, or contracts, but also can be less formal documents created in day-to-day work like e-mails, phone logs, and staff calendars.

Working With Archivists to Determine What Happens to Records. State Archives’ staff collaborate with departmental representatives to develop “record retention schedules” for both digital and physical records. A record retention schedule is a policy document that specifies what will happen to a record after it is created. Specifically, for each type of record, the record retention schedule will state: its type, a brief description of it, how many years it will be stored, where it will be stored, and when it should be destroyed or if it should be archived. A record retention schedule can be modified after it is created. Most departments comply with this process, but some do not, particularly in the case of digital records.

What Happens to a Record Depends on Its Type and a Department’s Needs. As shown in **Figure 3**, there are four paths a record can take under a record retention schedule. For example, Record A is stored temporarily (on site and then at a storage center) and later archived. Departments keep records for logistical reasons (for example, to inform an audit) or because they believe a record will be useful in their future work.

Departments Store Records Temporarily. Most records are stored temporarily and then destroyed (Records B and C in Figure 3). Before a record is destroyed or archived, it can be temporarily stored by a department in one of two locations. These are:

- **On-Site Facilities.** A record can be stored on-site at a department-controlled facility—typically a department’s headquarters or field office—if the department has storage space available. This provides the easiest access for departments, so they typically prefer this alternative when a record is useful for daily operations or accessed frequently by their personnel. Records typically are stored on-site with the department for a number of years, but the exact number depends on the department’s storage availability and needs.
- **State Records Center.** Many departments rent space for their physical records from the

Department of General Services' (DGS) State Record Center. A department typically stores records with DGS if—based on perceived or actual needs—a record needs to be in the department's possession for a specific reason (such as the potential of an audit), but the department does not intend to reference the record on a regular basis. DGS also is in the pilot stage of developing a digitization center where departments can rent space for records to be held in digital form.

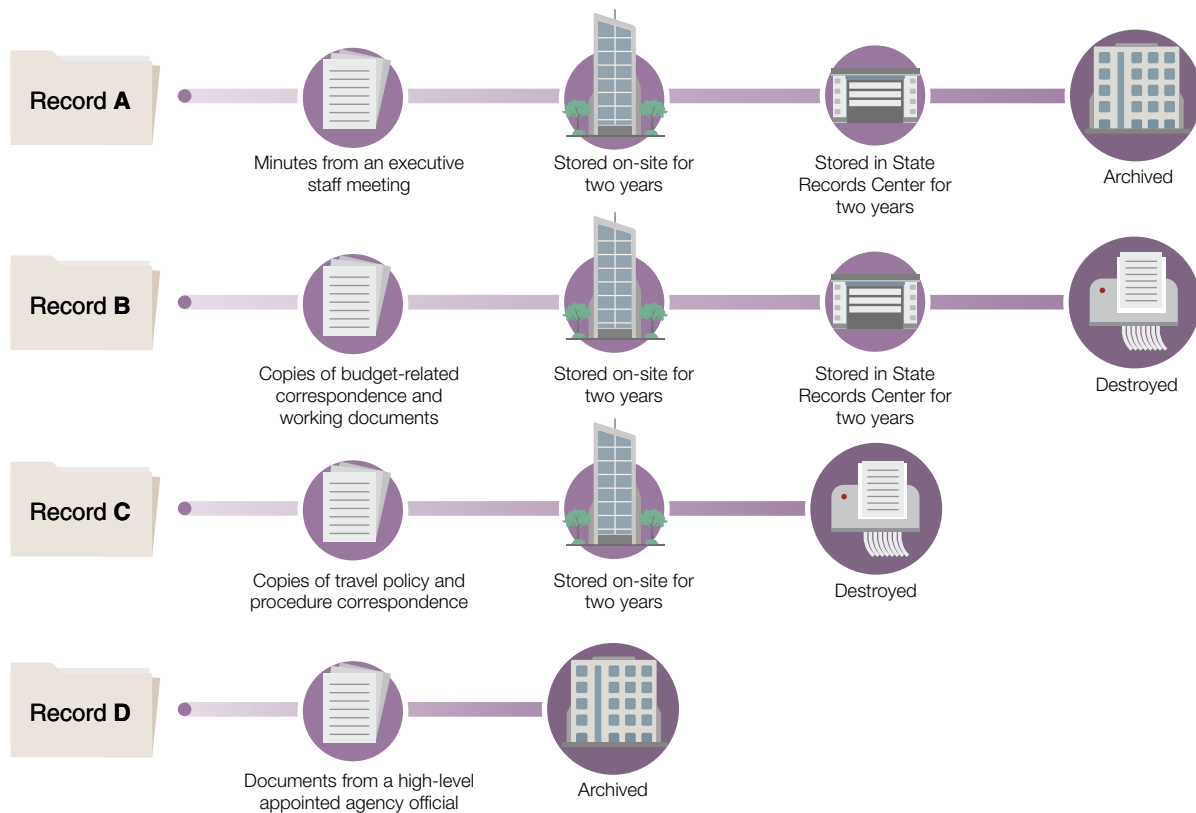
How Long Records Held Varies. Each department may hold the same kinds of records for different periods of time based on how long the record is useful to the department's operations. This means that the same type of record might be treated differently by different departments. For example, the Air Resources Board

might store general administrative correspondence on-site for four years, while the State Treasurer's Office might store this type of correspondence on-site for only one year before it is stored at DGS' State Record Center for four additional years. The length a department will opt to keep a record also depends on the type of record. For example, a department could hold a travel itinerary for one year and an inmate casefile for 25 years. For each record type and department, the specific temporary storage timing should be specified in the record retention schedule.

Some Records Permanently Preserved by State Archives. Only a small number of records that are temporarily stored are later archived. When a record retention schedule indicates the record should be archived, a department transfers its records to the State Archives and the State Records Appraisal Program Unit

Figure 3

Examples of a Departmental Record's Life Cycle^a



^a Non-exhaustive list of types of records. Record life cycle dependent on department protocol.

acquires and evaluates the record to confirm its archival value. Once archival value is confirmed, the record is archived. In rare cases, as shown with Record D in Figure 3, records are immediately archived, instead of temporarily stored.

State Archives Occasionally Removes Records From Collection. On occasion, State Archives' staff reevaluate a record's archival value. As a result of the evaluation, staff occasionally determine a record no longer has archival value. In these cases, the record will be removed from the collection and destroyed. Although rare, the State Archives' staff will destroy a record in the collection when they decide not to keep a record of its type anymore. In this scenario, staff would go through their collection and destroy any record that met a specific criteria. Staff would also stop archiving records that met those criteria and adjust record retention schedules as necessary. This process is rare because it can require substantial staff resources.

Process for Archiving Other Records

State laws and policies establish different standards for archiving records created by the Legislature, the State Supreme Court, the Courts of Appeal, and the Governor's Office. The State Archives generally does not collect records from local government entities, but the nearby box discusses some exceptions.

Legislature Transfers Its Records to State Archives. A variety of records are created through the legislative process. These records are created by legislators, committees, legislative staff, and members of the public. State Archives' staff work directly with legislators and their staff to determine which records should be archived. For example, toward the end of a Senator's or Assembly Member's term, State Archives' staff reach out to the legislator's staff to inform them

about records that have archival value and the types of records the State Archives is interested in including in the collection. In each instance, the State Archives and legislative staff develop a process to transfer records—both digital and physical—to the State Archives.

State Archives Determines Archival Value of Legislative Records. Once legislative records are received by the State Archives, the State Records Appraisal Program Unit evaluates each one to determine its archival value. There are two broad categories of legislative records that the State Archives considers to have archival value. They are:

- **Legislative Process Records.** The bill making process produces a variety of records including bill analyses, recordings of committee proceedings (transcripts or audio/video recording), committee agendas, and committee reports.
- **Personal Records.** Legislators and their personal staff produce many records, including constituent correspondence, internal memos, and calendars. Unlike committee records, these personal records are not considered public. Although not required, legislators often will gift these records to the State Archives at the end of their time in the Legislature because of the records' historic value. A legislator who gifts these records to the State Archives may restrict access to specific records.

State Archives Receives Governors' Records. The State Archives holds Governor's Office records, including proclamations, executive orders, pardons, press releases, and speeches. As a result of legislation, the State Archives has systematically collected these records since 1991, but also has received donations of pre-1991 records from Governors Earl Warren and

State Archives Holds Select Local Government Records

The State Archives has some special arrangements with local governments to hold records on their behalf. The State Archives sometimes enters into these arrangements because of the records' potential research value. For example, the State Archives holds records from 28 counties, either in original or microfilm form. These include court records, deeds, birth records, bonds, voter registrations, and marriage licenses. The State Archives also holds the Los Angeles Police Department's Robert F. Kennedy assassination investigation records because of their high research value and the city's limited preservation resources.

Goodwin Knight. The State Archives only receives these records when a governor leaves office. This means the State Archives receives a large quantity of records in those years.

Courts Routinely Transfer Records to State Archives. The State Archives collects court records from the State Supreme Court and Courts of Appeal. In particular, these include case files, minutes, registers of actions associated with decisions, and other court

actions that establish legal precedent. In recent years, the State Archives has worked with the courts to establish a policy that specifies which types of records the courts should submit to the State Archives and the timing of these submissions. For example, under this process, the State Archives receives relevant court documents five years after the date of the last action on the case. In addition, compared to state departments, the courts also have greater flexibility to use private storage facilities to store records.

ARCHIVAL STORAGE PRACTICES

In this section, we discuss archival practices used to maintain the records stored in the State Archives' collection. In particular, maintaining the collection requires specific conventions to preserve both physical and digital records.

Conventions for Physical Records. Physical records, particularly paper records, naturally deteriorate over time as they are exposed to light, heat, and humidity. The State Archives uses specific measures to slow this deterioration process and increase the usable life of a record. These measures begin with design features of the facility that houses the records. To this end, the State Archives' building has: (1) climate control features that allow staff to control temperature and humidity levels, (2) a strong foundation and reinforced floors to withstand the heavy weight of paper and artifacts, (3) a specialized fire prevention system to prevent record damage in the event of a fire emergency, and (4) windowless storage areas to prevent record exposure to sunlight. In addition to these features of the building, staff routinely monitor and regulate a record's exposure to light, heat, and humidity and store records in acid-free boxes.

Conventions for Digital Records. Digital records also require specific preservation conventions to increase their usable lives. Digital records may come to the State Archives on physical devices after many years in storage. Such devices deteriorate over time or otherwise become obsolete if not properly maintained—for example, the data on a floppy disk can become unreadable. The conventions we discuss in this section are related to the preservation of the digital file itself. Technological changes to software can render

digital files unreadable—for example, WordStar, a word processing software widely used in the 1980s, is no longer maintained by its owners.

The State Archives has adopted maintenance and management practices to store digital records with the intention of permanently preserving and accessing them. For example, the State Archives saves digital records in a specific format that is meant for archival purposes (referred to as a “PDF/A” format). This format ensures the record can be opened across multiple devices and specific features are saved with the file so it can open for many years. To store digital records, the State Archives uses:

- **Internal Storage.** The State Archives holds up to roughly 45 TB of digital records on the Secretary of State's internal server. These files are maintained in conjunction with all of the broader needs of the department.
- **External Storage (Preservica).** The State Archives also subscribes to a “cloud” storage system called Preservica to store digital records. The system uses redundancy to preserve digital files by saving three copies of each record in the cloud. The system self-checks each record with its copies. If there is an issue with one of the copies, the program will duplicate a usable copy and destroy the unusable copy. This process attempts to mitigate against external tampering or technology files becoming obsolete or corrupted. The State Archives currently rents 50 TB of storage space from Preservica for \$50,000 per year.

ARCHIVAL SPACE

In this section, we describe the past, current, and projected future storage capacity of the State Archives.

History of Archives Facilities

Records Originally Stored at State Capitol. Before the 1930s, the State Archives was located in the State Capitol. At various points in the state's history, the Capitol has been located in Monterey, San Jose, Vallejo, Benicia, San Francisco, and Sacramento. Whenever the state capitol moved, the State Archives collection (although much smaller than it is today) moved with it.

Archives Housed at Current Location Since the 1950s. From the late 1930s until 1956, the State Archives' collection was located in a warehouse on R Street in Sacramento. In 1956, the State Archives moved to a building that had previously housed the State Printing Office at the intersection of 10th Street and O Street (the location of the current State Archives' building). The original building at this location was critiqued for its small storage space, lack of environmental controls, and lack of a fire prevention system. These critiques provided the impetus for legislative action in the late 1980s to the early 1990s, which authorized the construction of a new State Archives and Secretary of State complex on this site. During construction, the State Archives temporarily moved to Roseville in 1992 and moved into its new building on O Street in 1995.

Current Storage and Facility Capacity

Current Facility Designed According to Archival Standards. The current facility was designed and constructed to improve the State Archives' ability to preserve a growing collection. To this end, the building has a number of features, including humidity control, a strong foundation, a specialized fire prevention system, and windowless storage. The State Archives' facility also has a number of specialized vaults that each hold a specific subset of the collection. These include: the high-security vault that holds the state's founding documents and other precious records, a media vault, and a photographic vault. The State Archives' general storage area is held at a constant temperature of 65 degrees Fahrenheit and the specialized vaults are held at colder temperatures for optimal preservation.

More Than Four-Fifths of Existing Physical Capacity Filled. Currently—with six stories of nine foot tall shelving—the facility has the capacity to hold over 146,000 cubic feet of records in the general storage area. The collection currently takes up 83 percent of this capacity and is growing.

Secretary of State Has Used Existing Funds to Increase Capacity. Beginning in 2008, the Secretary of State periodically has used existing funds to increase the capacity of the State Archives by replacing static shelving with mobile shelving. Modifying the shelving, by installing tracks where the shelves can move closer together, allows the State Archives to store more cubic feet of records using the existing building. As of 2014, the Secretary of State has spent roughly \$800,000 from existing funds to convert static shelving to mobile shelving. These improvements have increased the State Archives storage capacity by nearly 20,000 cubic feet.

Future Storage and Facility Capacity

Secretary of State Plans to Expand Storage Further. The Secretary of State plans to spend an additional \$400,000 to install mobile shelving for the remainder of the storage area—increasing total storage capacity to over 155,000 cubic feet. Once the mobile shelving installation project is complete, there are no other building modifications available to increase storage capacity.

Current Facility Will Run Out of Space, but Timing Is Uncertain. Even with expanded storage, under current practices, the State Archives will eventually run out of space for storing physical records. **Figure 4** compares the Archives' planned total capacity to its projected remaining capacity. Under the two scenarios shown in Figure 4 (described below), the State Archives likely will run out of space sometime in the next 7 to 13 years (between 2025 and 2031). Both scenarios depicted in Figure 4 assume the Secretary of State will spend additional funds to install mobile shelving.

Projecting Facility Capacity Dates. In Figure 4, the fast growth scenario (in which capacity is exhausted in 2025) assumes the collection grows by a fixed percentage each year. The slow growth scenario (in which capacity is exhausted in 2031) assumes the

collection grows annually by a fixed number of records. Both the percent and the fixed number increases are based on historical averages over the last decade. An estimate produced by the State Archives, which assumes an increase in records of 2.7 percent annually, is the faster growth scenario. This method results in faster growth because a larger number of records are archived each year. The slow growth scenario, which our office produced, assumes a fixed number of record growth. This method results in slower growth because it assumes a constant number of records are archived every year. Both of these scenarios assume increased numbers of records will be archived in the years when a governor is expected to leave office. There are, however, reasons to believe the growth rate of the State Archives' collection could be even slower than our slow growth scenario as departments increasingly transition toward the use of digital records. Taking these factors into account, we currently think it likely that the State Archives' capacity will be exhausted at some point within the next 15 years.

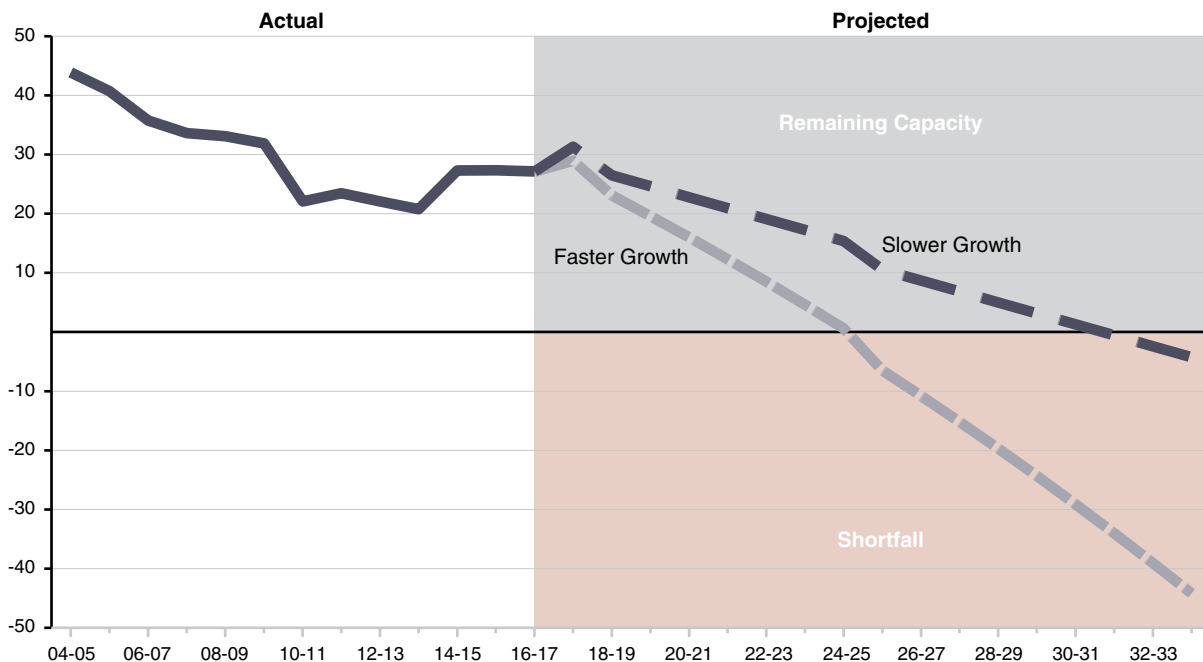
Collection Growth Depends on Some Unpredictable Factors. There are a number of additional factors that make it difficult to project when the State Archives' physical collection will reach capacity. These factors include:

- **Implementation of Law Change.** The State Archives expects the number of Governor's Office records archived to be significantly lower in the future. That is because a change in law in 2011 granted the State Archives more authority to retain only Governor's Office records it determines to have archival value. The exact number of these additional records in upcoming years is difficult to predict.
- **Growth of Digital Records.** Some departments may opt to use and store digital records instead of physical records. This factor has influenced recent growth rates of physical records and could affect future growth as well. If more departments opt to have digital record management, the

Figure 4

Archives Likely to Run Out of Space by Late 2020s

Remaining Capacity or Shortfall in Thousands of Cubic Feet



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current facility will have slower record growth, extending the capacity of the facility.

- **Department Compliance.** State departments do not all perfectly comply with archival practices. If more departments comply with the State Archives' records management policy, the State Archives will likely collect more physical records, exhausting the capacity in their facility sooner.

Timing Uncertain, No Plan in Place. There is no plan in place to archive new records in the event that the State Archives facility reaches full capacity. As a default, departments and other contributors to the State Archives' collection likely would store records with archival value internally or externally until the State Archives had additional space. This could

lead to increased departmental costs and a greater likelihood that records are damaged, lost, or otherwise unavailable to the public.

Future Needs for Digital Storage Also Expanding.

In the coming years the State Archives also will need to acquire a permanent solution for its storage of digital records. As departments and other entities within state government increase their technology use, they are likely to store increasing numbers of records digitally, rather than physically. The State Archives currently uses 60 TB of storage capacity for its digital records using internal servers and Preservica, but could access more internal storage temporarily if needed. Additionally digital storage may require added spending or redirection of spending from other Secretary of State activities.

ALTERNATIVES TO ADDRESS FUTURE FACILITY NEEDS

As discussed earlier, the State Archives' collection is likely to run out of space sometime within the next 15 years. In our view, the Legislature has two alternatives to address the State Archives' future storage capacity needs. First, the Legislature could leave unchanged the longstanding policy of relying primarily on physical storage of archival records. Eventually this would require the acquisition or construction of new State Archives facilities. Second, the Legislature could opt to significantly expand the State Archives' digital storage capacity, transitioning much of the collection over time to a digital format. We discuss the requirements and implications of each of these alternatives in more detail in this section.

Alternative to Continue Use of Physical Record Storage

Under the first alternative, the state would continue to rely on physical storage as the primary means for preserving archival records. As under current policy, departments and other entities would continue to transmit these documents to the State Archives in physical formats. The State Archives would also continue to collect increasing numbers of digital records as departments generate more records using computers and other devices. The State Archives could

maintain the current record management process for both physical and digital records.

Alternative Would Require New State Archives Facilities. Based on our discussions with the State Archives, there appear to be no options to significantly increase the storage capacity of the existing facility (beyond modifications already reflected in Figure 4). If the Legislature chooses to continue the State Archives' reliance on physical record storage, the collection of physical records will grow, eventually requiring the state to secure a new building to provide additional physical storage capacity.

Two Options for Securing a New Building. If the Legislature chooses this alternative, the state has two main options for securing a new building for the State Archives. The Legislature could appropriate funds from the General Fund or a future state bond issuance to either:

- ***Construct a New Building.*** The Legislature could pursue the construction of a new building for the State Archives to store physical records using its typical capital outlay process. Under this option, DGS, in collaboration with the State Archives, likely would need to oversee the design of the new building to ensure it has the specific conditions necessary for archival preservation. Alternatively, the state could pursue a build-to-suit

lease approach where the private sector constructs the building to state specifications, including the conditions necessary for archival preservation.

- **Modify and Lease an Existing Building.**

Alternatively, the Legislature could appropriate funds to lease an existing building that could be modified to meet the State Archives' needs. As we discuss in a nearby box, this approach was used for the California Department of Parks and Recreation (DPR), which leases a facility at the former McClellan Air Force Base northeast of Sacramento to house that department's archives and artifacts. As was the case with DPR's facility, lease agreements can be arranged to include provisions with a purchase option allowing the cost of building modifications to be spread over time.

Characteristics of a New Building. If the Legislature chooses this alternative, the new building would need specific characteristics to add capacity to the current archive facility and to provide preservation and public access. The State Archives probably would have to add capacity at a separate location while maintaining its existing facility in Sacramento. The

new building could be located outside of downtown (potentially at a lower cost to the state) but somewhere in the greater Sacramento region (so that State Archives' staff or users could travel frequently between the two locations). However, the site selection and facility design should take into consideration building features for optimal preservation. Design considerations could include the building's natural ability to regulate temperature and humidity, a strong foundation, and the ability to regulate incoming light.

Digital Record Capacity Would Also Require Expansion. The State Archives currently maintains its digital record collection using a combination of internal and external storage. As departments continue to increase their use of computer technology for communication, they will transmit increasing numbers of digital records to the State Archives. Under this alternative, while the state would need to build more physical record storage capacity, the growth of digital records would likely still require an expansion of the State Archives' digital record storage capacity.

Cost of Expanding Physical Storage Could Be Significant. The primary cost of expanding physical storage is related to constructing or modifying a new building, which could include costs related to planning,

Department of Parks and Recreation (DPR) Facility

Similar to the State Archives, DPR preserves artifacts from parks across the state in its Statewide Museum Collection Center (SMCC). Artifacts include Native American baskets, historic wagons, furniture, and clothing. DPR centrally preserves artifacts in the SMCC to (1) support artifact preservation efforts, (2) allow their parks to share exhibit items across the state, and (3) protect artifacts when certain parks are threatened from natural disasters like fires or floods. For example, one state park can temporarily borrow a chair from another park if the chair is located in the SMCC.

New Warehouse in 2013. For many years, DPR used a warehouse facility in West Sacramento to store these artifacts. In the early 2000s, the West Sacramento facility began running out of space and lacked environmental controls. DPR began the search for a new location outside of the flood plain, where it could optimally preserve the collection. DPR found a military facility at the former McClellan Air Force Base to house the SMCC. DPR currently has a 30-year lease with the option to purchase the facility. The facility was built for military purposes, and so it required minimal modifications to make its conditions appropriate for preservation. For example, the SMCC building has a strong foundation that can hold heavy artifacts and the walls are thick, which allows for more energy efficient temperature regulation.

DPR's Unique Relationship With the State Archives. DPR has permission from the State Archives to permanently store DPR records with archival value. DPR is the only agency that has this agreement with the State Archives because of the unique capabilities of its own environmentally controlled facility.

construction, and leasing. This alternative would also involve ongoing additional staffing costs to support the operations of the new building and the costs of storing paper in a temperature controlled environment, which increase as the physical storage area expands.

Alternative to Expand Digital Record Storage

Under a second alternative, the Legislature would direct the State Archives to increasingly rely on digital records as its primary archival mode. Under the new policy, departments and other entities would transmit records to the State Archives in a digital format. For example, a departmental letter would not be printed, but rather maintained in a digital format and transmitted to the State Archives through a digital portal. Physical records would still be archived, but only under special circumstances (for example, for artifacts, maps, and blueprints). This policy change could either delay or eliminate the need for a new building depending on the level of implementation. Below, we discuss how this alternative could be implemented.

Transition Incoming Records to Digital Records.

Under this alternative, the State Archives would transition primarily to archiving departmental records in digital form. Temporarily, while departments transition to the new system, the State Archives could digitize incoming physical records. For example, if a department sent the State Archives a printed memo, State Archives' staff could scan and digitally store that memo. Over time, as the State Archives communicated the new policy and departments changed storage and transmission practices, departments could transmit nearly all of their records digitally through a portal and digitization would no longer be necessary. This transition might also decrease the time elapsed between when a record is created and archived. The State Archives could follow a similar strategy for incoming records for other state entities.

Address Existing Inventory. For existing records that are currently stored as physical documents in the collection, the State Archives could gradually digitize and destroy many of its records. This would free up currently used space for future incoming physical records. Under this alternative, the State Archives could decide that a select record has archival value, but does not need to be held in paper form. Archivists would decide which records would be digitized and destroyed.

This would apply to physical records printed on standard letter or legal paper rather than more unusual documents, like maps and blueprints or physical documents of notable historic value.

Expansion of Digital Record Capacity Necessary.

To implement this alternative, both departments and the State Archives would need more digital storage capacity. If the Legislature chooses this alternative, the state has three main options for securing additional digital storage space. Specifically, the Legislature could appropriate funds to:

- ***Contract With Digital Storage Vendor.*** The Legislature could authorize funds for the State Archives to extend its existing contract with Preservica, a vendor that specializes in archival digital storage, and/or other vendors. As discussed earlier, such companies use practices that improve the long-term viability of digital records. Alternatively, the State Archives could contract with a vendor such as Amazon Glacier, which offers low-cost cloud storage services but charges to access records. This option does not offer specialized archival digital storage, but could be suitable for records that do not get accessed frequently.
- ***Expand Internal Storage Capacity.*** The Secretary of State could expand some of its current internal server capacity. If this option were implemented, the system would require specific technological modifications so that it could maintain the records for long-term use. These technology solutions would likely require a contract with a firm to build the system.
- ***Use State Data Storage Services.*** The California Department of Technology (CDT) maintains a state data center that provides a variety of services to departments. The Office of Technology Service, as the state data center is known, provides departments with data storage services. These services do not adhere to specialized archival digital storage practices. Under this option, the State Archives would pay CDT for storage services through rates set by CDT.

Records Management Process Could Be Streamlined. Under this alternative, departments may no longer need to store records in storage facilities until records are ready to be archived. Instead, digital

records with archival value could be transmitted through a portal without a time lapse to assure proper maintenance of the record.

Expanding Reliance on Digital Records Could Involve Significant Costs. This alternative would require additional resources to increase storage capacity, provide additional State Archives' staff to digitize incoming and existing records, and acquire specialized equipment (such as scanners and cameras) to allow the staff to complete that digitization. In the past, the State Archives estimated that, with its current levels of resources, it would cost approximately \$1 per page to digitize a physical record. This estimate

includes the scanning of a physical document in addition to cataloging the record and adding key words that make a document searchable.

Need for a New Building Could Be Eliminated or Significantly Delayed. Under this alternative, the Legislature could eliminate or significantly delay the date at which the State Archives would run out of space, essentially removing the necessity for a new building in the coming decade. This could be accomplished by simultaneously slowing the flow of new physical records and decreasing the collections of existing physical records, allowing the current building's existing capacity to be used for the highest priority physical records.

LAO COMMENTS

Key Decision Point

Decisions in Near-Term Will Determine Future Course of State Archives. In the coming few years the Legislature's decisions will determine how the state retains records for decades to come. As discussed earlier, the Legislature could increase physical capacity, keeping archival practices similar to the status quo. Increasing physical storage capacity would require the state to begin building plans within the next few years. Alternatively, the Legislature could increase digital capacity. This requires the Legislature to change policies by directing the State Archives to rely on digital records as the primary archival mode. The digital alternative could limit or delay the need for a new building depending on resources and implementation compliance.

Decision in Near Term Is Optimal. The optimal time for the Legislature to decide between these alternatives is in the next few years—well before the State Archives' current facility has reached capacity. Leaving current policy unchanged is likely to necessitate a new building because transitioning policy to expand digital record storage would be difficult to implement if the facility has reached or is near full capacity. The longer the Legislature waits to make a decision on this policy, the more likely it seems the State Archives will require additional building space.

Trade-Offs to Consider

As the Legislature determines which course to take for the future of the State Archives, there are a few trade-offs to consider, as discussed below.

Physical Records Could Be More Reliable. An advantage of relying on physical records is that archival standards have been developed over centuries and are known and reliable. Conversely, digital record technology is newer and less tested. For example, digital files could become obsolete and unusable between the time a record is created and the record is archived. Even if a record is usable, digital records require maintenance to prevent them from becoming obsolete, corrupted, and unusable in the future. For these reasons, the state's professional archivists and some users may have a strong preference to continue to primarily store physical records.

Digital Records Likely More Publicly Accessible. Digitizing records is the first step to providing online public access. If the Legislature provided additional funding for the acquisition or development of new technology, the State Archives could expand online access of digital records. This expansion would allow users to search for digital records and access them from a personal computer. As such, anyone, anywhere in the state could access the collection—rather than physically traveling to Sacramento.

Either Alternative Will Involve Significant Costs.

Providing a new physical structure for the State Archives would involve a major commitment of one-time resources—at least in the tens of millions of dollars. (These costs could be spread out over time by using leasing or bond financing.) The alternative of switching to a mostly digital archival format would also involve financial commitments to purchase new equipment and implement new processes for accepting, storing, and cataloguing digital information. (As we have seen from other state information technology projects, these types of projects also carry various risks.) While it is likely that the state would save money by avoiding the cost of a building, either alternative will involve new state spending.

LAO Recommendations

Recommend Legislature Decide on Future of Archival Practices. We recommend the Legislature decide within the next few years on its preferred direction for future archival practices. We have suggested two possible alternatives—continued physical storage or expanded digital storage options. After deciding which alternative to pursue, we recommend the Legislature direct the administration to produce a report that states the costs and benefits of options for the selected alternative. For either alternative, the administration's report should address the following:

- ***Timing.*** Any report should provide an estimated time frame over which the proposed option could be implemented and how long the proposed option is expected to meet the state's preservation needs. If the Legislature wishes to increase physical record capacity, the report should address how long it would take to acquire a new building or retrofit an existing building. For the digital alternative, the report should address how long it would take, with various levels of resources, to transition various quantities of the physical collection.
- ***Cost of Alternatives.*** The report should include the estimated cost of the physical and digital

storage options. For example, the report should address how much it would cost to procure sufficient digital equipment and personnel to transition much of the physical collection to digital formats. The cost estimates should include the costs of additional cubic feet or TB where relevant.

- ***Public Access to Records.*** The report should also mention how the proposed option would change public access to historically relevant documents.

If the Legislature Decides to Continue Use of Physical Record Storage . . . If the Legislature decides the State Archives should continue to rely on physical records, we recommend it direct the administration to report specifically on options for increasing physical record capacity. The administration's report should include the perspectives of the Secretary of State and the State Archives, in collaboration with DGS. The report should include costs and benefits of locations for constructing a new building or leasing and modifying an existing building. In the latter case, the report should detail the modifications likely to be needed to meet the State Archives' needs. (For example, the report could address how typical buildings available in the area would have to be modified to install shelving or reinforce foundations, if applicable.)

If the Legislature Decides to Expand Digital Storage . . . If the Legislature decides the State Archives should change policy and increasingly rely on digital records, we recommend it direct the administration to report specifically on options for increasing digital record capacity. The report should address the digital storage options (for example, using a contract with an external company or expanding internal storage options) and the extent to which these options meet the state's archival needs. The administration's report should include the perspectives of the Secretary of State and the State Archives in collaboration with CDT.

LAO PUBLICATIONS

This report was prepared by Sara Cortez and reviewed by Ann Hollingshead and Nick Schroeder. The Legislative Analyst's Office (LAO) is a nonpartisan office that provides fiscal and policy information and advice to the Legislature.

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