



Research Data Storage (Interim Procedures)

Responsible Official:	Chief Information Officer
Responsible Office:	Information Technology
Issuance Date:	TBD
Effective Date:	TBD
Summary:	Procedure for the electronic storage of research data on UCM-managed environments.
Scope:	Faculty, staff, students, affiliates

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I. REFERENCES AND RESOURCES

UC Policies

- IS-3 Electronic Information Security
<http://policy.ucop.edu/doc/7000543/BFB-IS-3>
-

Guidelines/Resources

- <http://www.ucop.edu/research-policy-analysis-coordination/index.html>
- <http://it.ucmerced.edu/security/>

II. POLICY/PROCEDURE SUMMARY & SCOPE

Electronic storage of data by researchers at UC Merced must be performed in an environment that is provisioned, managed, or approved by UC Merced Information Technology. A collaboration between researchers and IT staff will ensure that research data is being stored locally with appropriate security controls. This document affects all employed or affiliated personnel, including volunteers and trainees engaged in research-related activities at the University of California.

III. DEFINITIONS

Physical storage: Location controlled by the researcher where data can be physically stored, independent of internet connectivity. Examples include hard drives, flash drives.

Local Storage: Location on UCM property where data could be stored electronically on a physical device with appropriate physical security and environmental, power and back-up controls.

Remote Storage: Location off-site from UC Merced where data may be stored. Examples include UC Berkeley, San Diego Supercomputer Center. Any remote location must be accessible to UCM IT Staff. Examples include CatDrive.

Cloud Storage: Non-tangible location where data may be stored, subject to existing business agreement with UC. Examples include box.com, Amazon Web Services. Any cloud location must be accessible to UCM IT Staff.

IV. POLICY TEXT

Data generated, collected, or otherwise handled by researchers at UC Merced shall be stored in a system provisioned, managed, or approved by UC Merced Information Technology. This data will be accessible and secured in alignment with current UCM-supported business agreements and UCOP best practices.

This policy will enhance the process of compliance with data management in a research environment and lower the possibility of data being made available to non-authorized parties.

V. PROCEDURES

UCM researchers are to contact Information Technology regarding the appropriate solution for storing their data to ensure the accessibility, integrity, and security of the data for the duration of the research period. After initial consultation, UC Merced IT will propose a storage solution to comply with the researcher's needs, applicable law/policy, and best practices. The solution may include physical, local, remote, or cloud storage.

Electronically-stored data will be accessible via UC Merced account credentials, consisting of UCMNetId and passphrase.

The types of data considered under this policy include "Human Subjects" data, "Animal Subjects" data, and other research data created and collected by the researcher. With the exception of Human Subjects data, we are reliant on the researcher's expertise regarding the nature of the research data for classification purposes.

UC Policy IS-3 – Electronic Information Security defines protection levels for university data. Data with higher protection level classifications require additional security measures as specified in the IS-3 policies and standards. These additional protections may include encryption, multi-factor authentication, or other measures specified by UCM IT. Researchers will be instructed by IT on how to use the suggested solution, including the technical aspects of sharing, securing, and working within the storage environment.

In the instance of data being shared with a remote collaborator (non-UCM affiliate), "Data Ownership" language will be validated by Campus Counsel, and consist of acknowledgement by the remote collaborator that all research data is owned by the UC Regents, and that the collaborator is expected to comply with all appropriate controls

around the handling and protection of the research data. A backup copy of the data may be stored at a remote location, so long as the data is secured following the same procedures in place for data secured locally. The collaborating institution must sign a formal data sharing agreement with UC Merced before the remote copy can be stored.

Campus Counsel and the Campus Privacy Official will also be consulted for any additional considerations when developing the appropriate storage solution for the research project.

VI. RESPONSIBILITIES

Principal Investigators

- Contacting Information Technology for advisement on research data storage requirements and available solutions.
- Compliance with UC security and policy regarding data handling.

Information Technology

- Assessment and categorization of data classification and appropriate protection level.
- Development of appropriate solution based on researcher requirements.
- Compliance with Legal and Privacy requirements, in consultation with Campus Counsel and Privacy Official.
- Maintaining the accessibility, integrity, and security of the data while in storage.
- Compliance with State or Federal requirements specific to the data being handled, including destruction of data at the end of the research project, if specified.

Collaborative Researchers

- Agree that all research data is owned by the Regents of the University of California
- Agree to comply with all UC controls and practices for handling and security data
- Sign a formal data sharing agreement with UC Merced

APPENDICES

This document outlines how electronic storage of research data by UCM-affiliated researchers is conducted. With awareness that a draft document exists, written by the Research Policy Analysis and Coordination (RPAC) unit of UCOP (<http://www.ucop.edu/research-policy-analysis-coordination/about-rpac.html>), and currently is in review by the UC Systemwide Academic Senate, the information within this document is subject to change for compliance with the RPAC. Following is the content of the RPAC document:

APPENDIX 1 – Draft of current RPAC Systemwide Policy

I. Purpose

The collection and generation of data and tangible research materials is an integral part of any research project. Accurate and appropriately recorded research data, and

the creation and retention of tangible research materials, enable scholars to report, replicate, and refute research findings, which ultimately advances the research enterprise. Both the University and researchers have responsibilities concerning access to, use of, and maintenance of research data and research materials. These obligations are not new and are not unique to the University; they arise from express provisions in awards and agreements with federal and other research sponsors, overarching regulatory requirements relating to funded research, and fundamental precepts of research integrity. University access to records of research is critical for oversight purposes, such as responding to audits, establishing that past use of University or research sponsor funds was appropriate, responding to government demands or subpoenas, defending research findings, facilitating research misconduct proceedings, and facilitating proper conduct of research with humans or animals. This document sets forth basic guidelines to ensure that Research Data, as defined below, are appropriately documented, maintained, retained for a reasonable time, and accessible to the University for review and use.

II. Scope and Administration of the Guidelines

These Guidelines apply to all University of California employed or affiliated academic personnel, staff, and trainees, engaged in research or research-related activities at the University of California, regardless of the funding source of such activities. These Guidelines may also apply to students and non-University employees conducting any research using University research funds, resources, or facilities and/or in collaboration with individuals with University appointments. The Vice Chancellor for Research at each campus or his/her designee(s) is responsible for each campus' oversight, interpretation and implementation of these Guidelines. Administrative protocols specific to each campus may supplement these Guidelines as appropriate. The University President or his/her designee(s) is responsible for UCOP's oversight, interpretation, and implementation of these Guidelines.

III. Definitions

- a. "Principal Investigator": For the purposes of these Guidelines, the "Principal Investigator" is the individual who personally participates and has primary responsibility for the design, conduct and administration of a research project, regardless of the source of funding or status of that project.¹
- b. "Research Data" are recorded information reflecting original observations and methods related to a research study, and documentation of such data needed to reconstruct and evaluate reported results of the study, regardless of the form or medium on which it may be recorded, that is produced: (i) within a University researcher's course and scope of employment; (ii) using University research facilities or other research resources; or (iii) using funds provided by or through the University. Such data include, but is not limited to, computer software, databases, and data of a scientific or technical nature, such as laboratory notebooks, field notes, electronic storage media, and printouts. Research Data also include Tangible Research Material, as defined below. Research Data do not include administrative

¹ Contract and Grant Manual, [Chapter 1-520: Leadership of a Sponsored Project](#).

records incidental to award administration such as financial records, contract and grant records, etc. While such administrative records generated by University researchers are not included in the definition of Research Data under these Guidelines, they are the property of the University and may be subject to terms and conditions of individual sponsored projects, federal and state regulations, and University retention and disposition requirements.²

- c. "Tangible Research Material" is a tangible item produced or collected in the course of research: (i) within a University researcher's course and scope of employment; (ii) using University research facilities or other research resources; or (iii) using funds provided by or through the University. Tangible Research Material includes, but is not limited to, biological specimens, environmental samples, devices, prototypes, circuits, chemical compounds, genetically engineered organisms, cell lines, cell products, viruses, genetic material, plants, and animals.

IV. Ownership and Use of Research Data

Research Data are the property of The Regents of the University of California.³ The Principal Investigator shall retain original Research Data on behalf of the University, in accordance with Section VI.b. of these Guidelines. The Principal Investigator is responsible for ensuring that Research Data, whether generated by the Principal Investigator or the Principal Investigator's research team, are recorded, stored, and used in accordance with the standards of his or her respective discipline and any requirements of applicable federal or state law or regulations, University policies and guidelines, and University contractual commitments.⁴ The Principal Investigator should consult the appropriate campus office regarding the use and stewardship of Research Data that may be subject to applicable export control regulations, laws and regulations protecting the rights and privacy of human subjects, including, but not limited to, the Health Insurance Portability and Accountability Act of 1996 (HIPAA), or other applicable laws and regulations.

V. Data Sharing

The University of California supports the sharing of Research Data to advance public knowledge. In the interest of advancing knowledge, the University expects Principal Investigators to release and share final Research Data, particularly that which is described in a publication, for use by other investigators and researchers in a timely manner, consistent with the practices of the discipline involved. Further such release and sharing shall be in accordance with existing University policies and guidelines, including those related to intellectual property, sponsor requirements, and applicable laws and regulations, such as laws relating to protecting the rights and privacy of

² Other research data may be obtained through material transfer agreements, license agreements or other means. Such other research data that are not produced or collected by the University may be subject to third-party provider obligations, and should be handled in accordance with contractual commitments.

³ [University of California Regulation No. 4](#) (APM-020) provides that original records of the research are the property of the University. ("Original records" may include tangible records of research, such as biological materials, chemical compounds, plants, etc.). California Labor Code § 2860 provides that everything that an employee acquires by virtue of his/her employment (except compensation) belongs to the employer whether acquired during or after the term of employment.

⁴ Contract and Grant Manual, [Chapter 10-330: Principal Investigators](#).

human subjects. The National Institutes of Health policies on data sharing and sharing of biomedical research resources (http://grants.nih.gov/grants/policy/data_sharing/) and the National Science Foundation *Policy on Dissemination and Sharing of Research Results* (http://www.nsf.gov/pubs/policydocs/pappguide/nsf11001/aag_6.jsp#VID4) are models that investigators may find useful when planning for the sharing of Research Data. In all instances, Principal Investigators should consult relevant award and/or agreement terms to determine whether Research Data are subject to any special handling, use or restriction terms.

VI. Access to and Transfer of Research Data

a. University Responsibilities

- i. In most research contracts and grants, the University has committed to the sponsor that it will retain Research Data and make it available as appropriate.
- ii. Research agreements and clinical trial agreements with industry sponsors and other funding entities require careful negotiations to avoid placing restrictions on the University's access to, use of, and dissemination of Research Data.⁵
- iii. The University must be able to protect the ability of its affiliated academic personnel, students, postdoctoral scholars, and staff to access and use the Research Data from research in which they participated.⁶
- iv. The stewardship and storage of Research Data should be discussed and resolved as part of the exit process when a Principal Investigator leaves the University to ensure that Research Data continue to be accessible to the University in accordance with this guidance.

b. Principal Investigator Rights and Responsibilities

- i. In general, Principal Investigators should retain all Research Data for as long as possible, but not less than a minimum of six years after final reporting, publication, completion or abandonment of the project, unless a longer retention period is indicated by the funding source or other relevant agreement.⁷ The University may require a longer retention period to comply with applicable laws or regulations, support patent or intellectual property claims, or perform any necessary investigations associated with allegations of research misconduct. If a student is involved, Research Data must be retained at least until the student's degree is awarded or it is clear that the student has abandoned the work. Research Data may not be destroyed while an audit, research misconduct inquiry, investigation, public records request, or legal action involving such Research Data is pending.

⁵ [Principles Regarding Future Research Results: Open Dissemination of Research Results and Information](#); [Senate Concurrent Resolution \(SCR\) 66: Postsecondary education, academic research "gag clauses"](#).

⁶ [Principles Regarding Future Research Results: Accessibility for Research Purposes](#).

⁷ [Contract and Grant Manual, Chapter 17-310: Records Disposition Schedules for Contract and Grant Documents](#); [Administrative Records Relating to Research: Retention Requirements \(last updated June 2010\)](#).

- ii. If a co-investigator, student, trainee, or other member of a research team leaves the University, all original Research Data, including laboratory notebooks, must be left with the Principal Investigator. Except with respect to Tangible Research Materials, the departing researcher may take copies of Research Data for projects on which they have worked in accordance with these Guidelines. A co-investigator, student, trainee, or other member of a research team may not independently publish Research Data prior to first publication by the Principal Investigator without the written consent of the Principal Investigator. This should not be construed to prevent students from filing a copy of their dissertations or theses as required by their schools or departments, including depositing copies of their theses in archives as may be required by their schools or departments.
- iii. Handling of Research Data that are not Tangible Research Material Upon Leaving the University: Except in the case of Tangible Research Material, a departing Principal Investigator may take copies of Research Data produced by him or her or under his or her direction while at the University when he or she leaves the University. Copies of Research Data containing personally identifiable health information of patients or subjects may not be taken except pursuant to applicable laws, regulations and consistent with University policies.⁸ Original Research Data that are not Tangible Research Materials may be transferred only with approval of the Vice Chancellor for Research or his/her designee, generally under a written consent between the University and departing Principal Investigator. In all cases, the University reserves the right to access the original Research Data.
- iv. Handling of Tangible Research Materials Upon Leaving the University: When a Principal Investigator leaves the University, Tangible Research Materials shall remain at the University. Subject to any third-party restrictions, Tangible Research Materials may be transferred to a departing Principal Investigator only with the approval of the Vice Chancellor for Research or his/her designee, generally under a material transfer agreement between the University and the Principal Investigator's new employer.

⁸ [Contract and Grant Manual, Chapter 18-272: Records Retention, Inspection and Copying \(Protection of Human Subjects in Research\)](#).