



THE UNIVERSITY OF  
**TENNESSEE**  
HEALTH SCIENCE CENTER™

# CRITICAL FREEZER INVENTORY GUIDELINES

9/30/2022

## 1. INTRODUCTION

The Tennessee Treasury Department, Division of Claims and Risk Management administers the risk and claims process for the State of Tennessee's Property Self-Insured Coverage to protect Higher Education Institutions in the event of a covered loss. The State's Property Insurance Coverage also covers the institution's research projects for covered perils such as equipment failure, power outages and natural disasters. In recent years the State has seen an increase in property claims that involve research specimens stored in freezers that have failed. These failures resulted in the destruction of specimens being stored by the institution's researchers. The losses of these specimens includes, but is not limited to, lost time of collecting specimens, loss of grant funding, lost wages and critical information that would have supported the researchers' findings.

As part of insuring these types of losses the Treasury Department has required that the University maintain an inventory of critical freezers that contain research specimens, annually audit this critical freezer inventory, and for freezer owners to implement a plan to mitigate loss of research specimens associated with freezer failure. The requirements associated maintaining compliance with this order or described in UTHSC procedure *RS203 - Critical Freezer Inventory*.

## 2. CRITICAL FREEZER INVENTORY

### Critical Freezer Inventory

The Office of Research Safety Affairs maintains the institutional critical freezer inventory. All freezers containing research specimens that are to be insured against loss must be included in this inventory. Refer to the *Freezer Loss Control Program Checklist* in Appendix A for guidance identifying and creating an inventory of freezer contents.

- Researchers must complete the *Critical Freezer Registration Form* in Appendix B to notify the Office of Research Safety Affairs (RSA) of freezers to be added to the institution's critical freezer inventory. Email the completed form to RSA at [labsafety@uthsc.edu](mailto:labsafety@uthsc.edu).
- Researchers must notify RSA of any freezers to be removed from the inventory by emailing [labsafety@uthsc.edu](mailto:labsafety@uthsc.edu) and identifying the manufacturer, model and serial number of freezers that are no longer in their possession or no longer contain research specimens that need to be insured.

### Guidance for Completing the Critical Freezer Registration Form

- **Freezer details (type, manufacturer, model, temperature rating and age):** Provide this information to identify
- **Building air-conditioned:** Critical freezers should be located in a temperature-controlled environment to minimize stress on the equipment.
- **Building fire alarm system (smoke and sprinklers):** Critical freezers should be located in buildings equipped with a fire alarm system, including smoke detectors and sprinklers, to minimize the potential for loss in case of fire.
- **High temperature and loss of power alarms:** Alarms alerting researchers to high freezer temperature alert personnel to possible freezer failures. Research staff should be instructed to recognize and respond to alarms following procedures established in an

Emergency Response Plan. If possible, these alarms should be networked to alert personnel at times when the area may be unoccupied.

- **Access control (security):** Restricting critical freezer inventory access to authorized individuals and ensuring that appropriate individuals can access freezer contents in the event of failure are important measures when protecting specimens.
- **Backup power:** Critical freezers should draw power from outlets serviced with back-up power. Back-up power outlets in university buildings are typically red and are serviced by a back-up generator that activates in the event of a power loss. Back-up generators are tested monthly. Contact UTHSC Facilities administration at 901-448-5660 for additional information about the availability of back-up power in your location or for further assistance.
- **Emergency response plan:** This plan should identify individuals responsible for addressing issues involving critical freezers and detail actions to be taken to mitigate loss or potential loss of specimens. This may include contingency plans for alternative storage of specimens. A template is provided in Appendix C of these guidelines.
- **Estimated cost to replace the freezer:** Identify the cost of purchasing a new unit with comparable functionality.
- **Estimated cost of freezer contents:** When estimating the value of freezer contents consider all anticipated content replacement costs including re-collecting samples, establishing cell lines, additional staff, time and rewriting or research grant applications, etc.

### 3. ANNUAL AUDIT OF CRITICAL FREEZERS

Researchers are required to verify the record of critical freezers in their possession by participating in an annual audit of critical freezers. Researchers with laboratory space at UTHSC will be prompted by RSA to verify the record of critical freezers at the time of their annual lab safety inspection. Researchers without laboratory space will be contacted by RSA or their Business Manager to review and update their inventory.

At the time of the annual audit researchers should ensure completion of the following:

- New freezers have been added to the inventory
- Freezers no longer in use or possession have been removed from the inventory
- Freezer contents have been accurately inventoried
- Maintenance has been performed as per service plan or manufacturer's instructions
- Note the age of the freezer. Consider replacement of units nearing the end of their serviceable lifetime.

### 4. SUSTAINABILITY

Low and ultra-low temperature freezer use is energy intensive. Researchers should run only the necessary number of freezers. Maintaining an accurate inventory, including specimen location, can minimize the amount of time or number of times freezers need to be opened. Additionally, performing routine maintenance (e.g., cleaning cooling coils, periodically defrosting, etc.) as per manufacturer specifications may help ensure the most efficient operation of freezers.

## 5. CLAIMS

If a freezer and its contents have been included in the institution's critical freezer inventory a loss to these items may be covered. To submit a claim for the loss of a critical research freezer or its specimens a Property Loss Report must be completed and sent to the University of Tennessee Office of Risk Management at [riskmanagement@tennessee.edu](mailto:riskmanagement@tennessee.edu). Claims must be submitted within 24-hours of identifying the loss. The Property Loss Report is provided in Appendix D of these guidelines.

After a Property Loss Report has been submitted complete the Property Claim Packet to identify the contents of the freezer and the freezer itself. The Office of Risk Management will need documentation of the cause of the freezer damage, estimates for the repair and/or replacement, documentation of the purchase of the damaged freezer, pictures, and additional supporting documentation. The Property Claim Packet is provided in Appendix E of these guidelines.

- If the loss is estimated to exceed the State's deductible of \$50,000 the Office of Risk Management will contact the state's adjuster to contact the department head and researcher to arrange a meeting to begin the adjustment process.
- If the loss is estimated to be between \$10,000 (the campus/department portion of the State's deductible) and \$49,999.99 the University of Tennessee will handle the claim "in house". If this is deemed a covered loss, the department would be responsible for the \$10,000 and the Office of Risk Management has a self-insurance fund to cover up to the State's deductible.
- If the loss is estimated to be less than \$10,000, the department will be responsible for the loss.

APPENDIX A  
FREEZER LOSS CONTROL PROGRAM CHECKLIST

## FREEZER LOSS CONTROL PROGRAM CHECK LIST-RESEARCH SPECIMENS

The following actions shall be conducted to assist with identifying the locations of your registered critical freezers and prevent potential loss of specimens through the use of the both the Freezer Registration Form and the Freezer Audit Form.

1. Create an inventory team for the purpose of information-gathering and to undertake an initiative to address issues that have already been identified.
2. Conduct a backup power assessment to determine capacity (building by building), any additional electrical outlets needed, and whether backup generators are needed per research storage location. If a generator is used at a specific location, make sure that generator works as intended as an electrical power backup. (Regular testing and maintenance of generators is recommended.) Determine the length of time that backup generators would provide and make sure that the backup duration (time) provided is sufficient for alternative plans to be made or undertaken. If the time provided is insufficient, create alternative plans.
3. Inventory freezers to identify which freezers are not connected to backup power and do not have monitoring alarm systems. Determine if there is a need to purchase extremely critical temperature monitoring systems to provide local and remote alarms, including contacting offsite personnel by e-mail, text, or cellphone. This technology can be fitted to any scientific refrigerator or freezer.
4. Inventory contents being stored in each freezer, include the description of specimens, the value of each specimen, and the overall funds used to collect the specific specimens.
5. Make sure that freezer rooms do not over load the system resulting in outages. (Review number of outlets and determine the room is below maximum load.) Post signage of maximum number of freezers allowed per outlet. Do not overload the system.
6. Perform regular cleaning and maintenance on freezers.
7. Determine if equipment, including freezers, needs to be replaced. It is recommend to monitor the age of freezers and plan for a replacement schedule based on shelf life.
8. Consider implementing a centralized monitoring system that will alarm and notify designated personnel when freezers experience a power interruption and temperature increase. Regular

## FREEZER LOSS CONTROL PROGRAM CHECK LIST-RESEARCH SPECIMENS

testing of monitoring systems is recommended. Ensure that backup systems are in place to provide backup to monitoring systems. If no monitoring system is used, ensure a designated individual is assigned to physically inspect and log twice daily whether the freezer(s) are operational during regular business hours, weekends, and holidays.

9. If using software monitoring systems, test monitoring systems regularly. Make sure you have planned for and tested backup systems to ensure that software monitoring systems are performing correctly. Provide for surge protectors and regular replacement of batteries when necessary.
10. Perform regular in-person inspections of freezers and freezer rooms. (Personal observation is often better than relying on technology.) Make sure that freezers are connected to outlets, freezer doors are adequately secured, and freezers are operational.
11. For high-value research specimens, if feasible, do not store all samples in one location. Spread the risk of loss or damage due to freezer failure by storing in other protected locations.
12. Develop and implement an Emergency Response Plan that identifies individuals responsible for addressing issues involving critical freezers (-80 °C) and detail actions to be taken to mitigate loss or potential loss of specimens. This may include contingency plans for alternative storage of specimens or fault in the freezer that cannot be corrected or repaired in an acceptable and timely period.
13. For high-value research projects, identify locations and determine if security measures are appropriate to keep unauthorized individuals from entering research storage area.

APPENDIX B  
CRITICAL FREEZER REGISTRATION FORM





APPENDIX C  
EMERGENCY RESPONSE PLAN TEMPLATE

CRITICAL RESEARCH FREEZER  
EMERGENCY RESPONSE PLAN

This Emergency Response Plan is intended to ensure is intended to define the response procedure to be followed to protect research specimens in case of alarm or freezer failure.

This Emergency Response Plan assigns responsibility for the freezers listed below.

Freezer Location	Freezer Model/Type/Serial Number

The individual(s) listed below should be contacted in the event of alarm or freezer failure.

Name	Contact Phone Number and Email

The individual(s) listed below are responsible for posting signs and ensuring personnel are familiar with the response procedure to follow in case of freezer failure.

Name	Contact Phone Number and Email

The company identified below is responsible for maintaining or servicing the freezers covered by this plan.

Name	Contact Information	Contact Number (if applicable)

APPENDIX D  
PROPERTY LOSS REPORT



THE UNIVERSITY OF  
TENNESSEE

Office of Risk Management

**Property Loss/Damage Claim Report**

1. Use this form to first report potential or actual loss or damage of University-owned property to Risk Management.
2. Each department must complete this form as soon as they are made aware of an incident; inaccurate or incomplete reports will slow the recovery and reimbursement process; failure to provide timely notification or supply required documentation and cooperate with the University's loss adjustment personnel may jeopardize potential recovery for the University and your department.
3. Please attach other pertinent information that will facilitate claim processing i.e. photos, estimates of damage, inventory of damaged/missing items, copies of estimates, if available.
4. In the event there is damage in excess of \$10,000, the [Property Claim Packet](#) MUST be completed, including copies of estimates, copies of the bills/invoices for repairs/replacement, and proof of payment.
5. Applicable loss sharing/deductibles will be assessed against the total reimbursement for each incident in accordance with [UT's Insurance Policy](#) located in UT System's Fiscal Policy.

Street Address of Incident:	
School/Dept./Building Name:	
Other details of exact location:	
Department Head Name:	
Claim Contact Name:	
Claim Contact Phone Number:	
Claim Contact Email Address:	
Date & Approximate time of loss:	
Is this the first report of loss?	Yes      No      If no, date of last submittal: _____

Cause of Loss					
(mark all that apply)					
Fire and/or Smoke	<input type="checkbox"/>	Roof Leak	<input type="checkbox"/>	Theft or Vandalism	<input type="checkbox"/>
Lightning	<input type="checkbox"/>	Pipe Leakage	<input type="checkbox"/>	Transit/During Shipment	<input type="checkbox"/>
Wind	<input type="checkbox"/>	Backup of Sewers or Drains	<input type="checkbox"/>	Vehicle	<input type="checkbox"/>
Flood	<input type="checkbox"/>	Underground Seepage	<input type="checkbox"/>	Utility Interruption	<input type="checkbox"/>
Hail	<input type="checkbox"/>	Escaped Fluids	<input type="checkbox"/>	Electrical Failure or Disturbance	<input type="checkbox"/>
Tornado	<input type="checkbox"/>	Mechanical Breakdown	<input type="checkbox"/>	Spoilage	<input type="checkbox"/>
Freezing	<input type="checkbox"/>	Computer Virus or Cyber Attack/Threat	<input type="checkbox"/>	Hazardous Materials Release/ Contamination	<input type="checkbox"/>
Earth Movement, Settling, or Cracking	<input type="checkbox"/>	Explosion	<input type="checkbox"/>	Other (provide explanation below)	<input type="checkbox"/>
<b>Other / Notes:</b>					

505 Summer Place - UTT 1048C • Knoxville, TN 37902  
Fax: (865) 974-0936 • Email: [riskmanagement@tennessee.edu](mailto:riskmanagement@tennessee.edu)



THE UNIVERSITY OF  
**TENNESSEE**  
 Office of Risk Management

**Property Loss/Damage Claim Report**

1. Describe the property lost/damaged and the causation in detail (narrative of circumstances surrounding event):	
2. Estimate Dollar Value of the Loss <i>Approximate value to repair and/or replace damaged property with like kind and quality.</i>	
Comments:	
3. List all witness names and contact information (including contractors and UT employees working near the location):	

	Yes	No
4. Did you take measures to protect the property from further damage? How?		
Comments:		
5. Can the damaged property be salvaged in any way to minimize the ultimate loss?		
Comments:		
6. Was Facilities Services contacted to inspect and repair the loss? If not, who?		
Comments:		
7. Did the police, fire or other agency/utility respond to the loss event? Agency Name & Contact:		
Comments:		
8. Has Belfor, the state's remediation contractor, been contacted to assist in cleanup and water extraction?		
9. What is the current estimate of how long it will take to repair?		
10. Estimated time that department/school/unit operations will be materially impaired as a result of the loss event?		
11. Did or will your department experience any significant lost revenues or increased expenses associated with the loss (outside of the direct damage to the property)? If so, what is your estimate of the cost of the interruption?		
Comments:		
12. Was there an outside, non-UT party(s) responsible for the loss? If so, provide name and address, describe in detail how party is potentially responsible:		
13. Is there a contract with the responsible party? If so, provide copy of the contract.		
14. Was any of the University of Tennessee's proprietary/confidential data or other protected personal information lost or compromised in this event?		
Comments:		

APPENDIX E  
PROPERTY CLAIM PACKET



# The University of Tennessee Property Claim Packet – Instructions

Electronic version of Property Claim Packet is  
available at <http://riskmanagement.tennessee.edu>

Office of Risk Management  
505 Summer Place - UTT 1048C  
Knoxville, TN 37902

Phone: (865)974-5409  
Fax: (865) 974-0936  
Email: [riskmanagement@tennessee.edu](mailto:riskmanagement@tennessee.edu)  
Website: <http://riskmanagement.tennessee.edu>

**IN THE EVENT OF PROPERTY DAMAGE CONTACT THE APPLICABLE DEPARTMENT(S) AS FOLLOWS:** UTPD- security assistance & crime reporting; Facilities Services - building damage and clean up; Environmental Health and Safety - hazardous materials, potential mold etc.; OIT electronic equipment impacted; Risk Management - claims process.

**PREVENT FURTHER DAMAGE** (e.g. move items from water) and **PRESERVE EVIDENCE** of cause of the loss and damaged items by photographing and retaining all items until Risk Management approval to surplus or discard is obtained.

## REPORTING and CLAIM SUBMISSION REQUIREMENTS

**WITHIN 3 days** of the incident and in order to establish your department's claim, you must submit columns 1 and 2 of the **Property Claim Packet – Damaged Property Spreadsheet** to [riskmanagement@tennessee.edu](mailto:riskmanagement@tennessee.edu) or fax to: (865) 974-0936.

**Late reporting may result in denial of coverage.**

**WITHIN 6 MONTHS** of the incident or conclusion of theft investigation: you must submit the pertinent documents listed below. Risk Management may modify these requirements for particular claims. Replacement expenditures of stolen items recovered by the police are not eligible for settlement. **If your documentation is not received by the 6-month claim deadline date your department's claim will be closed.**

## DOCUMENTS

**Property Claim Packet – Damaged Property Spreadsheet** should be used for repaired or replaced University-owned items. Submit the spreadsheet with the following documentation listed by column numbers:

3. Copy of original University purchase documents for damaged items, if replacement involved, as well as photographs. (Hint: the date of these purchases is prior to the date of the loss)
4. Vendor statement indicating the cause of the damage, a description and photos of the physical damage, and that any item replaced could not be repaired and that the replacement is the most comparable available. (Hint: to prove your claim by documenting there was damage caused by the incident and justification that what you spent was the least amount possible). For theft claims, a police report number is required in addition to vendor statement regarding replacement is the most comparable available.
5. Copy of invoices showing repair or replacement. (Hint: the date of these invoices is on or after the date of loss) and proof of payment for all amounts submitted for reimbursement (Hint: the Invoice Summary out of IRIS will show the actual payment)
6. Salvage value, if replacement is involved. (Hint: You must address whether there is potential for surplus sale recovery or value for parts you are keeping to determine what amount to deduct for the surplus value. You must retain all items until you seek and receive approval from Risk Management to surplus or discard)

The coverage reimburses the lesser of repair or replacement of covered property damaged by a covered peril, less the \$15,000 for water claims, \$10,000 for all other perils and (\$10,000 for theft) departmental deductible (pro-rated for multiple departments). The coverage pays the full value of functionally similar (most comparable- no upgrades or warranties) property.

NOTE: FEMA requires additional forms and information.

**Property Claim Packet – Labor Spreadsheet** should be used for Non-exempt & Wage University Labor for actual repair. Managerial and exempt labor, fringe benefits and overhead are not covered. The coverage will not cover more than a contractor would charge. Please advise Risk Management once decision has been made to use employee labor. NOTE: FEMA requires additional forms and documentation and may cover non-repair labor.

**Property Claim Packet - Extra Expense Spreadsheet** should be used for expenses resulting from property damage and necessary for business continuity. Submit this form with a best estimate of costs to Risk Management for discussion regarding possible coverage and required documentation.



Building Name: \_\_\_\_\_

Room Number: \_\_\_\_\_

Date of Loss: \_\_\_\_\_

## PROPERTY CLAIM PACKET - DAMAGED PROPERTY SPREADSHEET

<b>Claim Number:</b>	<b>Department:</b>	Electronic version of Property Claim Packet is available at <a href="http://riskmanagement.tennessee.edu">http://riskmanagement.tennessee.edu</a>
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**DEPARTMENT CONTACT Name, Phone Number & Email:**

Item No.	Column 1	Column 2	Column 3	Column 4	Column 5	Column 6	Column 7
	Damaged Property Items	Preliminary repair/replacement cost estimate	Proof of UT ownership and photographs	Vendor statements and photographs	Repair/replacement invoices and proof of payment	Salvage Value - if replacement involved	Final repair or replacement cost
1							
2							
3							
4							
5							
6							
7							
8							
9							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
<b>Total preliminary cost estimate</b>			<b>Total amount being submitted for coverage</b>				



