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**SUNY CORTLAND  
ENVIRONMENTAL HEALTH  
AND SAFETY OFFICE**

***FIRE PROTECTION SYSTEM  
IMPAIRMENT PROGRAM***

*PROGRAMS, POLICIES, AND PROCEDURES*

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*FIRE PROTECTION SYSTEM  
IMPAIRMENT PROGRAM*

*REVISION 1  
OCTOBER 2021*

## Revision History

Revision	Date	Reason for Revision
0	February 2021	Initial Issue
1	October 2021	Correction to fire watch interval and log

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# Fire Protection Impairment Program

## 1. Introduction

The probability of fire or explosion causing major structural damage or casualties increases when fire alarm and fire protection systems are impaired. The risk of damages and their severity increases the longer the system remains impaired. Therefore, it is necessary to minimize the duration and scope of any impairment. This document contains an effective management program used to minimize the risks associated with fire alarm and fire protection impairments.

## 2. Purpose

This program provides guidance to authorized individuals who wish to modify the normal operation of SUNY Cortland's fire alarm and fire protection systems during demolition and/or construction, emergency outages, maintenance, testing and planned system impairments of occupied buildings.

***\*\* This document does not include guidance on hot work activities. \*\****

All questions and concerns regarding the implementation of this program should be directed to the Environmental Health and Safety (EH&S) Office at (607) 753-2508 or x2508. Deviations from the requirements outlined in this policy require approval from the EH&S Office.

## 3. References

- NFPA 25 – Standard for the Inspection, Testing, and Maintenance of Water-Based Fire Protection Systems
- NFPA 72 – National Fire Alarm & Signaling Code
- NFPA 101 – Life Safety Code
- International Fire Code, Chapter 9, Fire Protection Systems
- SUNY Cortland's Emergency Action Plans

## 4. Definitions

**Fire Protection System** – Approved devices, equipment and systems or combinations of systems used to detect a fire, activate an alarm, extinguish or control a fire, control or manage smoke and products of a fire or any combination thereof.

**Fire Watch** – The assignment of a person or persons to an area for the express purpose of notifying the fire department, the building occupants, or both of an emergency; preventing a fire from occurring; extinguishing small fires; or protecting the public from fire or life safety dangers.

**Impairment** – A condition where a fire protection system or unit or portion thereof is out of order, and the condition can result in the fire protection system or unit not functioning in a fire event.

**Planned impairment** – Is a scheduled impairment. It may occur during routine preventative maintenance, during facility renovation or new construction.

**Emergency impairment** – Occurs when an unexpected event impairs the normal function of the protection system. Emergency impairments are the result of an unexpected power outage, accidents or damage incurred to the system.

**Hidden impairment** – Is a concealed impairment which is not known to exist. Hidden impairments occur when a fire protection system is improperly reset or inadvertently left out of service upon completion of work, a system is shut down without proper notification, or a system is maliciously shut down.

**Impairment Coordinator (IC)** – The person who manages the impairment while system work is being performed and has overall responsibility for proper implementation of the Fire Protection Impairment Program. ICs include but are not limited to employees of Facilities Planning Design and Construction, Facilities Operations and Services, University Police Department, Environmental Health and Safety, or outside contractors.

## 5. Responsibilities

**Administration** – SUNY Cortland has the overall responsibility for providing a place of employment free of recognized hazards and unsafe conditions, as well as complying with federal, state, and local standards and regulations.

**University Police Department (UPD)** – Have the responsibility of notifying Cortland County E9-1-1 Communication Center whenever a fire protection system is impaired or restored to service. UPD will also send reports of all fire protection system alarm activations to Facilities Operation and Services for investigation by a qualified technician.

**Environmental Health and Safety (EH&S)** – Have the responsibility of ensuring local, state, federal, and insurance company compliance with the Fire Protection Impairment Program and the responsibility for guidance and technical expertise needed to oversee the program. Responsibilities also include providing training for affected personnel.

**Department Supervisor** (whose employee(s) engage in fire impairment work) – Ensures that all aspects of this Program are implemented and hazards are controlled so not to present a hazardous exposure to University employees, students and visitors. It is also the responsibility of Department Supervisors to ensure the employee(s) designated to perform fire impairment work utilize the necessary procedures and equipment to minimize that employee's own exposure to the fire hazards generated. Department Supervisors have the responsibility to issue Impairment Permits and ensure the Permits are completed prior to start of work.

**University Employee(s)** (engaged in fire impairment work) – Are responsible for following this Program and implementing controls that will eliminate or greatly reduce the fire hazards generated by their work for the protection of themselves, University employees, students

and visitors. Personnel using tools or equipment for fire impairment work are also responsible for ensuring that equipment is in proper working order, the work site is made safe prior to start of work, and the area is made fire safe prior to leaving the work area.

**Fire Watch** – Is responsible for ensuring that safe conditions are maintained during fire impairment operations and for reporting all fires that have developed regardless if it was extinguished or not. The fire watch has the authority to stop the fire impairment work operation if an unsafe condition develops.

**Project Supervisor(s)** for Outside Contractor(s) – Are responsible for ensuring outside contractors and subcontractors involved in fire impairment work have and follow the provisions of this Program. Project Supervisors will advise all outside contractors about flammable materials or hazardous conditions of which they may not be aware.

## 6. Tag Impairment System

The Tag Impairment System helps you plan and manage impairments and insures the restoration of full fire protection. There are two parts to the Tag Impairment System:

### Permit

A permit (primary tag) shall be used to document that a system, or part thereof, has been removed from service. The permit shall be posted at the fire alarm control panel or fire department connection. The permit is also used to document that a system, or part thereof, has been restored to full service.

### Tags

Tags (supplementary tag) shall be used to indicate the specific locations or devices affected by the impairment. Supplementary tag placement will be determined by the Impairment Coordinator.

## 7. Preplanned Impairments

All preplanned impairments shall be authorized by the Impairment Coordinator.

The Impairment Coordinator will complete the Fire System Impairment Permit (Appendix A).

Before authorization is given, the Impairment Coordinator or a designated representative shall be responsible for verifying that all of the following procedures have been implemented:

- 1) The extent and expected duration of the impairment have been determined.
- 2) The areas of buildings involved have been inspected and the increased risks determined.
- 3) Recommendations to mitigate any increased risks have been submitted to the building administrator.
- 4) Where a fire protection system is out of service for **more than 4 hours in a 24-hour period**, the impairment coordinator shall arrange for one of the following:
  - (a) Evacuation of the building or portion of the building affected by the system out of service.
  - (b) An approved fire watch.
  - (c) Establishment of a temporary water supply.



- (d) Establishment and implementation of an approved program to eliminate potential ignition sources and limit the amount of fuel available to the fire.
- 5) The following groups will be notified of a preplanned impairment of a fire protection system:
  - SUNY Cortland University Police Department
    - UPD will contact Cortland County E9-1-1 Communications Center
  - Fire alarm monitoring company (if utilized)
  - Building Administrator for the affected building
- 6) The supervisor in the trade's areas to be affected have been notified.
- 7) A permit and tag impairment system has been implemented.
- 8) Necessary tools and materials have been assembled on the impairment site.

## **8. Emergency Impairment**

Emergency impairments shall include, but are not limited to, interruption of water supply, frozen or ruptured piping, and equipment failure, and includes impairments found during inspection, testing, or maintenance activities.

Where unplanned impairments occur, appropriate emergency action shall be taken to minimize potential injury and damage. The Impairment Coordinator shall implement the steps outlined in Section 7.

## **9. Restoring Systems to Service**

When all impaired equipment is restored to normal working order, the impairment coordinator shall verify that the following procedures have been implemented:

- 1) Any necessary inspections and tests have been conducted to verify that affected systems are operational and placed back into service. Consult NFPA 25 for guidance on the type of inspection and test required.
- 2) Supervisors have been advised that protection is restored.
- 3) Advise the following groups that protection has been restored:
  - SUNY Cortland University Police Department
    - UPD will contact Cortland County E9-1-1 Communications Center
  - Fire alarm monitoring company (if utilized)
  - Building Administrator for the affected building
- 4) Remove permit and all impairment tags from the system.
- 5) Return the completed Fire Protection Impairment Permit to EH&S.

## **10. Training**

It is expected that any SUNY Cortland employee that may need to authorize a fire protection system impairment has received training in the impairment management procedures using the Fire Protection Impairment Permit. The EH&S Department will train and consult with any employee, at the request of their supervisor, on the topic of personal and fire safety as it relates to fire protection system impairment.

All supervisors and employees involved in overseeing activities that may lead to a fire protection system impairment will also be trained on the provisions and guidelines of the Program and how to complete and distribute the Fire Protection Impairment Permit and understand the precautions necessary to prevent a catastrophic fire event when automatic systems are out of service.

## **11. Fire Watch Requirements**

A fire watch is a temporary measure intended to ensure continuous and systematic surveillance of a building or portion thereof by one or more qualified individuals for the purposes of identifying and controlling fire hazards, detecting early signs of unwanted fire, raising an alarm of fire and notifying the fire department.

### **Establishing a Fire Watch**

A fire watch will be utilized where a required fire protective system is out of service or the person who has jurisdiction over a building believes that its occupants are in “imminent danger” due to fire alarm malfunctions. The Impairment Coordinator shall evaluate for risk planned impairments on an individual basis and determine how a fire watch shall be implemented and for how long it will be required. A written fire watch plan may be required for prolonged periods of impairment. A fire watch may be authorized by the following additional person(s).

- The University Police Department Chief
- The on-duty University Police Department Supervisor (emergency impairments only)
- The SUNY Cortland Emergency Manager
- The SUNY Cortland Codes Official
- The Director of Facilities, Planning, Design and Construction
- The Director of Facilities Operations and Services
- SUNY Cortland Environmental Health and Safety Office
- SUNY Cortland Maintenance Supervisor 3

The Fire Department having jurisdiction shall be notified of any fire watch.

### **Fire Watch Designee**

In most instances, any qualified, competent adult may be assigned to fire watch duty. The Fire Watch Designee shall be:

- 1) Physically capable of conducting surveillance of a building or portion thereof utilizing means such as foot patrols;
- 2) Trained on general; fire detection techniques;
- 3) Equipped with at least one approved communication device for immediate notification of the fire department if signs of fire are observed. Signs of fire include flames, smoke, burning odors, and/or increased temperatures; and
- 4) Equipped with a device capable of notifying building occupants to evacuate.

Unplanned impairments that require a fire watch due to imminent hazard to occupants will typically be conducted by Police / security personnel. During planned impairments, the most

appropriate person for fire watch will be selected by the Impairment Coordinator or person authorizing the fire watch. This selected individual may or may not be a university employee. During construction, the Fire Watch Designee may be a construction contractor performing the fire watch.

### **Conducting a Fire Watch**

A fire watch shall consist of a patrol of the entire building/complex or the portion of the building affected by an out-of-service fire protection system. The frequency of a fire watch patrol shall be based on a risk analysis and will be determined by the person authorizing the fire watch. The standard patrol frequency for occupied buildings shall be every half-hour or less frequently as conditions warrant. The Impairment Coordinator should be consulted about appropriate frequency of the fire watch.

### **Fire Watch Patrol Records**

A Fire Watch Patrol Log (Appendix C and available through the Impairment Coordinator) shall be kept by the Fire Watch Designee. Additionally, the Impairment Coordinator shall maintain the following records that include the following information;

- The building or specific area covered by the fire watch, including the address
- Any fire and/or safety-related incidents or observations occurring
- Date(s), time(s), reason requested, and by whom fire-watch was started
- Name of individual conducting the fire watch
- Copies of all Fire Watch Patrol Logs
- Date and time at which the fire watch was ended
- Reason fire watch was ended, and by whom
- Any action taken as a result of the fire watch
- Date and time of notification to Fire Department having jurisdiction

Fire watches conducted by Police and Security Services shall be recorded by dispatch.

Additionally, Fire Watch Patrol Logs shall be available for review by the Fire Department having jurisdiction.

### **Ending Fire Watch**

A fire watch may be ended when a system is in place that meets or exceeds notification standards of the required fire protection system. The same individuals listed above who can approve a fire watch have the authority to end a fire watch.

# Appendix A – Impairment Permit



## FIRE SYSTEM IMPAIRMENT PERMIT

ATTACH TO FIRE DEPARTMENT CONNECTION OR FIRE ALARM CONTROL PANEL

NAME OF BUILDING AND CONTACT NUMBER      EMERGENCY PHONE #

Building

Requestor       Phone

Organization       Phone

EXACT LOCATION OF VALVE, SPECIAL HAZARD SUPPRESSION SYSTEM, ZONE, OR FIRE ALARM DEVICE:

AREA PROTECTED BY VALVE, SPECIAL HAZARD SUPPRESSION SYSTEM, ZONE, OR FIRE ALARM DEVICE:

FIRE PROTECTION SYSTEM IMPAIRED (CHECK ALL THAT APPLY)

<input type="checkbox"/> FIRE ALARM SYSTEM	<input type="checkbox"/> DETECTION SYSTEM	<input type="checkbox"/> AUTOMATIC SPRINKLER SYSTEM
<input type="checkbox"/> STANDPIPE AND HOSE SYSTEM	<input type="checkbox"/> UNDERGROUND PIPING & CONTROL VALVES	<input type="checkbox"/> FIRE PUMPS
<input type="checkbox"/> WATER SUPPLY	<input type="checkbox"/> SPECIAL SUPPRESSION SYSTEMS	<input type="checkbox"/> OTHER

OTHER:

REASON FOR IMPAIRMENT

REQUIRED IMPAIRMENT CHECKLIST

<input type="checkbox"/> NOTIFIED EH&S	<input type="checkbox"/> NOTIFIED UNIVERSITY POLICE DEPARTMENT	<input type="checkbox"/> REMOVE FIRE ALARM / DEVICES
<input type="checkbox"/> HOT WORK PERMIT (IF REQUIRED)	<input type="checkbox"/> FIRE WATCH ESTABLISHED	<input type="checkbox"/> HAZARDOUS OPERATIONS STOPPED
<input type="checkbox"/> LOCKOUT / TAGOUT REVIEWED	<input type="checkbox"/> IMPAIRMENT PERMIT AND TAGS POSTED IN ALL REQUIRED LOCATIONS	

ACTUAL START DATE  TIME       END DATE  TIME

PERSONS PERFORMING WORK (PRINT NAMES) \_\_\_\_\_

\_\_\_\_\_

I verify the above location has been examined, and the precautions checked on the required precautions checklist have been taken to prevent fire and permit the impairment of the above equipment/system.

<p>_____  <small>PRINT NAME (Work Coordinator)</small></p> <p>_____  <small>SIGNATURE</small></p> <p style="text-align: right;"><small>Inspection Date / Time</small></p>	<p>_____  <small>PRINT NAME (Impairment Coordinator)</small></p> <p>_____  <small>SIGNATURE</small></p> <p style="text-align: right;"><small>Inspection Date / Time</small></p>
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REQUIRED RESTORATION CHECKLIST

<input type="checkbox"/> NOTIFIED EH&S	<input type="checkbox"/> NOTIFIED UNIVERSITY POLICE DEPARTMENT	<input type="checkbox"/> REMOVE FIRE IMPAIRMENT PERMIT
<input type="checkbox"/> ACTIVATE FIRE ALARM / DEVICES	<input type="checkbox"/> ALL MECHANICAL DEVICES IN SERVICE (LOCKED BACK IN PROPER POSITION)	

SEND COMPLETED FORMS TO ENVIRONMENTAL HEALTH & SAFETY OFFICE – SERVICE GROUP ROOM 108

Appendix B – Additional Impairment Tags

**FIRE  
PROTECTION  
OUT OF  
SERVICE**

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Building

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Emergency Phone #

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Requestor

**FIRE  
PROTECTION  
OUT OF  
SERVICE**

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Building

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Emergency Phone #

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Requestor

**FIRE  
PROTECTION  
OUT OF  
SERVICE**

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Building

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Emergency Phone #

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Requestor

**FIRE  
PROTECTION  
OUT OF  
SERVICE**

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Building

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Emergency Phone #

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Requestor



# ATTENTION OCCUPANTS

## FIRE WATCH IN PROGRESS

***Fire alarm or sprinkler system is out-of-service for repairs, construction, or maintenance.***

Qualified individuals are conducting a continuous tour of common areas to provide smoke and/or fire detection. Please be alert to evidence of smoke or fire.

Contact University Police at (607) 753-2111 (x2111) or dial 911 immediately if fire is seen or suspected.

**EVACUATE THE BUILDING IMMEDIATELY UPON HEARING  
AIR HORN, WHISTLE, OR OTHER ALERT**