

RESORT NAME

Fire Protection System Impairment Program

Program designed according to NFPA 25 chapter 14

1/14/16

Introduction

There are times when it may be necessary to disable sprinkler, fire suppression and/or fire alarm systems on property. The probability of a fire or explosion causing major damage is increased whenever a system, alarm or device is impaired.

An impairment is defined as a shutdown (in whole or in part) of a fire protection system. Fire protection systems include sprinkler systems, standpipe/hose systems, fire pumps, fire protection water supplies, fire mains, fire alarm systems, and special extinguishing systems (i.e. clean agent, wet/dry chemical, foam/water, etc.).

Many large losses in protected properties might otherwise have been small had it not been for an impaired fire or explosion protective system. When an impairment is planned or occurs accidentally, precautions must be taken to minimize the duration and extent of the impairment, ensure prompt restoration, provide temporary protection and supervision, and reduce hazards in the affected area.

Purpose

The purpose of the procedure is to provide guidance on when and how these systems and their components are to be disabled and re-enabled.

Scope

Employees and contractors shall follow this procedure whenever it is necessary to disable a fire protection system. This procedure applies to all sprinkler systems, fire suppression systems and fire alarm systems and their components. This includes planned or emergency outages of the system or devices. Sprinkler impairment requirements can be found in the *International Fire Code* Section 901.7. 2

Types of Impairments

There are three types of impairments: Planned; Emergency; and Hidden.

A **Planned Impairment** is a scheduled impairment. It may occur during routine preventive maintenance, during facility renovation or new construction. **Emergency Impairments**, sometimes called unplanned impairments, occur when an unexpected event impairs the normal function of the protection system. Emergency impairments are the result of a fire accident or damage incurred to the sprinkler system, such as a ruptured or leaking pipe or an interruption of the water supply. A **Hidden Impairment**, or concealed impairment, is one which is not known to exist and is, therefore, the most serious type. It occurs when a fire protection system is inadvertently left out of service upon completion of work, a system is shut down without proper notification, or a system is maliciously shut down.

Assignment of an Impairment Coordinator

The *International Fire Code* 901.7.1 requires the assignment of an Impairment Coordinator by the property owner. The Impairment Coordinator:

- Authorizes the shutdown of the fire protection system.
- Ensures that the impairment procedures are being followed and completed.
- Verifies that steps to restore systems to service have been followed and that the systems are restored to service as soon as possible.

The Sprinkler Impairment Tag - See Exhibit B

The Sprinkler Impairment Tag helps you plan and manage impairments and restore full fire protection. Hang the tag on the control valve or other impaired device. The tag acts as a reminder that authorization is needed before the system can be shut down and to indicate that a system, or portion thereof, has been removed from service. The engineer in each building should be familiar with the procedure involved.

PROCEDURES

Before a Planned Impairment: - See Exhibit C

Determine the expected duration of the impairment, and the area of the building involved.

- Inspect the areas or buildings involved and determine the increased risk.
- Get authorization from Resort's Impairment Coordinator to shut down the sprinkler system.
- Notify the **Fire Department** – (Security- ???) so they can be ready to handle any emergency that might occur.
- Notify security (**Carl which #????**), as well as **Risk Engineering – Phone Dispatch**) that the sprinkler system will be out of service.
- Assign a fire watch to patrol area where protection is out of service.
- Plan to have temporary fire protection on hand: extra fire extinguishers or charged fire hose lines if applicable.
- Shut down any hazardous operations involving flammable liquids or spark generating equipment.
- Relocate combustible materials from an impaired sprinkler area to an area protected with sprinklers, if possible.
- Expedite the work. Workers, materials, equipment and tools should be ready before any system is shut off.
- Attach the impairment tag to the affected sprinkler control valve or control device.
- Notify employees in area that fire protection systems will be shut off.

- If the impairment is prolonged, consider setting up temporary sprinkler protection, by running a hose from the hydrant to the 2-inch drain of an active sprinkler system.
- Determine how to quickly return the sprinkler system to service in case a fire occurs during the impairment.
- Lastly, shut down the affected fire protection system and begin work.

During the Impairment

- Prohibit all hot work including cutting and welding and open flame. If hot work is essential to complete the work, discuss in advance with the fire marshal or the Impairment Coordinator and/or Director of Engineering.
- Patrol area where protection is out of service. If the impairment occurs for more than one work day or if the alarm notification system is also impaired the building has to be occupied 24 hours under fire watch.
- Prohibit smoking.

After the Impairment

- Open all valves that were secured during the impairment.
- Remove Impairment Tag once valves are open.
- Lock sprinkler control valves in the wide open position.
- Conduct a 2-inch drain test in the wide open position.
- Ensure the fire protection system is placed back to “automatic” service.
- Reset alarm system and notify security -
- Notify the Fire Department.
- Notify Risk Engineering
- Notify resort’s Impairment Coordinator.
- Notify affected employees that fire protection system is back in service.
- Keep completed impairment tags on file for one year.

Emergency Impairment

- For unplanned impairments such as a sprinkler pipe leaking or breaking up after a freeze, immediate action must be taken to control a major loss.
- Stabilize the situation and immediately follow the procedures outlined in “Before a Planned Impairment”.
- After repairs have been completed follow the procedures in “After the Impairment”.

Hidden Impairment

The hidden impairment can be prevented by:

- Locking all sprinkler control valves in the open position with a sturdy lock and chain.
- Inspecting all sprinkler control valves weekly to assure that they are locked and in the open position.
- Inspect, test and maintain all fire alarm and fire detection devices regularly.

If the protection system is found impaired, the conditions should be immediately reported to the resort’s Impairment Coordinator.

Employee Training

The following resort personnel are to be trained in the Sprinkler Impairment procedures.

- All Safety and Engineering Department managers and supervisors.
- All Engineering Department personnel that work with the sprinkler and fire protection systems.
- At minimum, one engineer on each shift at every building that has a sprinkler system.

During the training, the Sprinkler Impairment Tag is shown and trainees are instructed on how to follow the steps on the permit. A copy of the procedures is to be issued to each person and a signed receipt is required that verifies they have read the procedures and understand how the system works. **See Schedule A.**

Contractors Must Follow Sprinkler Impairment Procedures

All contractors that work on the fire protection system or need to shut off the fire protection system during construction, remodeling or short duration repairs must follow the Fire Protection System Impairment procedures outlined in this program. A copy of the procedures is to be provided to the contractor(s) and a signed receipt is required that verifies they have read and will comply with the resort's procedures. **See Schedule B.**

Contractors must coordinate with the Engineering Department and the Impairment Coordinator before closing a sprinkler valve to ensure that all Fire Protection System Impairment steps are followed and action to mitigate fire losses are taken. The fire protection system must be restored to full service as soon as possible to provide fire protection to the building.

Schedule "A"

Fire Equipment Impairment Program Training

Employee acknowledgement of Training:

I, the undersigned, have received a hard copy of the Resort Impairment Program as well as proper training. I understand the program, how the system works and its importance to life safety and protection of property.

Date: _____ Signature: _____

Schedule "B"

Resort Fire Equipment Impairment Program Contractor Acknowledgement

I, the undersigned, representing the contractor, _____, have received a hard copy of the Resort Fire Equipment Impairment Program. I have read and understand and agree to comply with the policy.

Date: _____ Signature: _____

Position of Authority: _____

Exhibit A

ATTENTION

When shutting down any portion of the sprinkler system, either for preventive maintenance or in an emergency,
Contact Engineering

Call or Email the Impaired Fire Protection Form at Dispatch.

Or

E-Mail the impairment details to:
Engineering

Exhibit B

VALVE SHUT TAG
(Attach security to the closed valve)
Engineering

FIRE HAZARD

**SPRINKLER SYSTEM
IMPAIRED**

**FIRE
HAZARD**

**SPRINKLER SYSTEM
CONTROL VALVE SHUT**

Exhibit C

**Fire Protection
Impairment Sheet**

Engineering

Attention: Engineering

Phone Dispatch

From: _____

Date: _____

Company: _____

Building: _____

Location: _____

Phone No: _____

Ref. No: _____

PLANNED IMPAIRMENT

System to be shutdown (Please indicate by placing an 'x')

___ Automatic Sprinkler System

___ Fire Pump(s)

___ Alarm System

___ Fire Main

___ Firewater Storage Tank

___ Other (CO2, Halon etc)

Comments: _____

Reason for Shutdown: _____

Area Affected: _____

Start Time / Date: _____

Estimated Duration: _____

___ Use shut off tag

___ Notify Fire Department

___ Notify department heads

___ Notify Security

___ Cease all hazardous operations

___ Work to be continuous

___ Hose / extinguishers available

___ Additional watchman surveillance

___ Ban welding / cutting / hot work

___ Emergency connection planned

___ No Smoking

___ Continuous Fire Watch

___ Other (Please Specify)

Change to Impairment Conditions: _____

Time Restored:

Name: _____

Date: _____ AM ___ PM

**Risk
Engineering**

INSTRUCTIONS:

1. Fill out section 1 prior to shutdown (48 hours before where possible). E-mail to address above.
2. Fill out Section 2 and resend e-mail if there are any changes to the impairment.

3. Fill out Section 3 when the impairment is restored and e-mail to address above.

Our risk control service is advisory only and is not intended to serve as legal advice. We have not tried to identify all hazards or issues related to the subject matter expressed. RHA assumes no liability or responsibility for management or control of member activities or for implementation of recommended best practices. RHA does not represent that requirements of any federal, state, or local law, regulation, or ordinance have been addressed. Member should consult with their counsel on all such matters.