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Emergency Generators

Overall maintenance should be done on emergency generators once a year. However, the fuel level, battery charge, cleanliness, and wiring should be checked monthly. After each use, it is also recommended that PM be performed. *(See the Maintenance Cost Data in the **Appendix** for a complete PM estimate for emergency generators.)*

Use this checklist as a guide for auditing building elements and performing appropriate PM procedures. Note deficiencies and required maintenance and repair at the end of this checklist. Check each box when the item has been inspected and any necessary PM tasks have been performed.

- ☐ **Operation**
- ☐ **Fuel level**
- ☐ **Oil and engine air filter condition**
- ☐ **Battery charger condition**
- ☐ **Battery condition** for proper charge and connection
- ☐ **Gauge condition**
- ☐ **Circuit breaker condition**
- ☐ **Activation device condition** (starter, pull cord, switches, etc.)
- ☐ **Spark plug condition**
- ☐ **Terminal condition**
- ☐ **Belt condition** for deficiencies such as wear and stress
- ☐ **Wiring condition**
- ☐ **Cleanliness**
- ☐ **Housing and base condition**
- ☐ **Overall condition**
- ☐ **Other**

Date

Initials

Emergency Generators

Deficiency Report

Check any categories that have deficiencies. Note specific issues and planned maintenance or repair tasks to address them.

- ☐ **Operation**
- ☐ **Fuel**
- ☐ **Oil and engine air filters**
- ☐ **Battery charger**
- ☐ **Batteries**
- ☐ **Gauges**
- ☐ **Circuit breakers**
- ☐ **Activation devices**
- ☐ **Spark plugs**
- ☐ **Terminals**
- ☐ **Belts**
- ☐ **Wiring**
- ☐ **Cleanliness**
- ☐ **Housing and base**
- ☐ **Overall condition**
- ☐ **Other**

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Backflow Devices

Backflow devices prevent the flow of water or other liquids, mixtures, or substances into the distributing pipes of a potable supply of water from any source other than intended. All backflow devices should be tested annually by a certified plumbing contractor. Maintenance personnel should monitor the contractor's performance and obtain written certification upon completion of work.

Use this checklist as a guide for auditing building elements and performing appropriate PM procedures. Note deficiencies and required maintenance and repair at the end of this checklist. Check each box when the item has been inspected and any necessary PM tasks have been performed.

- ■ **Backflow devices** (should be tested only by a certified plumbing contractor)
- ☐ **Other**

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Backflow Devices

Deficiency Report

Check any categories that have deficiencies. Note specific issues and planned maintenance or repair tasks to address them.

- ☐ **Backflow devices**
- ☐ **Other**

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Electrical Systems

Electrical systems and closets should be inspected annually. Maintenance personnel should be familiar with the locations of all electrical equipment, including circuit breakers, fuses, main feeders, subfeeders, panel boards, and substations. All wiring should be in compliance with the *National Electric Code®*. The safety of workers is paramount; staff should ensure that power is shut off and / or lines are de-energized where work is performed. It is recommended that electrical equipment be serviced by outside contractors unless there is a licensed electrician among the in-house staff.

Use this checklist as a guide for auditing building elements and performing appropriate PM procedures. Note deficiencies and required maintenance and repair at the end of this checklist. Check each box when the item has been inspected and any necessary PM tasks have been performed.

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- ☐ **Equipment cleanliness**
- ■ **Distribution system**
  - ☐ Wire and cable condition for deficiencies such as corrosion, delamination dirt, moisture, and fire hazards
  - ☐ Connection condition
  - ☐ Overall condition
- ■ **Circuit breakers**
  - ☐ Hardware condition
  - ☐ Porcelain condition
  - ☐ Cotter pin condition
  - ☐ Air supplier operation
  - ☐ Appropriateness for load
  - ☐ Overall condition for deficiencies such as corrosion, noise, and excessive temperatures
- ■ **Fuses**
  - ☐ Insulator condition for deficiencies such as burns or cracks
  - ☐ Contact surface condition for deficiencies such as burning, pressure, and misalignment
  - ☐ Fuse holder condition
  - ☐ Hardware condition
  - ☐ Overall condition
- ☐ **Lock security and lubrication**
- ☐ **Utility room cleanliness and safety**
- ☐ **Overall integrity**
- ☐ **Overall condition** for deficiencies such as loose wires, debris, corrosion, potential power failure, and water encroachment
- ☐ **Other**

Date

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Electrical Systems

Deficiency Report

Check any categories that have deficiencies. Note specific issues and planned maintenance or repair tasks to address them.

- ☐ **Equipment**
- ☐ **Distribution system**
- ☐ **Circuit breakers**
- ☐ **Fuses**
- ☐ **Locks**
- ☐ **Utility room**
- ☐ **Overall integrity**
- ☐ **Overall condition**
- ☐ **Other**

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Fire Extinguishers

The following annual PM checklist is for fire extinguishers throughout the facility. This inspection and certification must be conducted by a licensed specialty contractor and should be scheduled in advance to ensure that the date on extinguishers will not expire. Monthly inspections of fire extinguishers' general condition, housing, and location per code should be conducted as part of preventive maintenance procedures in areas including business offices, common kitchen areas, locker rooms, restrooms, fitness / recreation areas, and swimming pool areas. In addition to the annual PM tasks outlined below, check the pressure and weight of each extinguisher in the facility every six months, according to its manufacturer's label. If the pressure is below the recommended minimum or if the extinguisher has been used, it should be recharged. Consult NFPA Standard 10 for the specific requirements about proper locations of fire extinguishers and signage. *(See the Maintenance Cost Data in the **Appendix** for a complete PM estimate for fire extinguishers.)*

Use this checklist as a guide for auditing building elements and performing appropriate PM procedures. Note deficiencies and required maintenance and repair at the end of this checklist. Check each box when the item has been inspected and any necessary PM tasks have been performed.

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- ☐ **Certification**
- ☐ **Housing condition**
- ☐ **Hose condition**
- ☐ **Proper location per code**
- ☐ **Count per code**
- ☐ **Overall condition**
- ☐ **Other**

Date

Initials

Fire Extinguishers

Deficiency Report

Check any categories that have deficiencies. Note specific issues and planned maintenance or repair tasks to address them.

- ☐ **Certification**
- ☐ **Housing**
- ☐ **Hose**
- ☐ **Location**
- ☐ **Count**
- ☐ **Overall condition**
- ☐ **Other**

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Hot Water Heaters

Preventive maintenance of hot water heaters should be performed annually. *(See also **HVAC Systems** for other heating components.)*

Use this checklist as a guide for auditing building elements and performing appropriate PM procedures. Note deficiencies and required maintenance and repair at the end of this checklist. Check each box when the item has been inspected and any necessary PM tasks have been performed.

- ☐ **Circulation pump connections**
- ☐ **Gas flame color** (gas pilot should be blue with yellow at tip)
- ☐ **Burner condition** for deficiencies such as corrosion, inordinate flame pattern, and cinders
- ☐ **Pilot function**
- ☐ **Tank plate and jacket condition** for deficiencies such as corrosion or rust
- ☐ **Door and lock function**
- ☐ **Drain valve lubrication and function**
- ☐ **Earthquake strap and bolt condition**
- ☐ **Gas shut-off valve lubrication and function**
- ☐ **Piping supply lines for leaks**
  (Note: Use soap and water and/or hand-held gas detector.)
- ☐ **Tank water clarity**
  (Drain to remove sediment.)
- ☐ **Pressure relief valve function**
- ☐ **Temperature setting**
  (Note: Use commercial grade thermometer.)
- ☐ **Draft diverter condition**
- ☐ **Flue and chimney condition**
- ☐ **Vent condition**
- ☐ **Utility room** for deficiencies such as as dirt, debris, and storage of materials
- ☐ **Condition of electrical conduit** (if applicable)
- ☐ **Overall condition** for deficiencies such as rust in water, water and fuel leaks, and unusual sounds or odors
- ☐ **Other**

Date

Initials

Hot Water Heaters

Deficiency Report

Check any categories that have deficiencies. Note specific issues and planned maintenance or repair tasks to address them.

- ☐ **Circulation pump**
- ☐ **Gas flame**
- ☐ **Burners**
- ☐ **Pilots**
- ☐ **Tank plates and jackets**
- ☐ **Doors and locks**
- ☐ **Drain valves**
- ☐ **Earthquake straps and bolts**
- ☐ **Gas shut-off valve**
- ☐ **Piping supply lines**
- ☐ **Tank water clarity**
- ☐ **Pressure relief valves**
- ☐ **Temperature setting**
- ☐ **Draft diverters**
- ☐ **Flue and chimney**
- ☐ **Vents**
- ☐ **Utility room**
- ☐ **Electrical conduit**
- ☐ **Overall condition**
- ☐ **Other**

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Roofing

The roof tends to be the most costly component of the facility, subject to a variety of weather conditions and temperature fluctuations. The early discovery and preventive maintenance of minor deficiencies extends its life and reduces the chance of premature failure, costly repairs, and damage to interior spaces below.

Annual inspections of both membrane and building components should be conducted for roofs of any age, including newly installed ones. Adequate time should be allotted to properly perform the many tasks involved in inspection. A roof should be surveyed completely, either by carefully walking it in its entirety where accessible (wearing soft shoes), or by visual inspection with binoculars where inaccessible. Visual inspection from the attic side is also important.

Attention should be paid to southern and northern exposures, weather-generated problems, horizontal lines, peak areas, and areas of sagging. Ventilation areas should also be examined for obstructions. *(For preventive maintenance of **Gutters/Roof Drains**, see corresponding annual checklist. See the **Appendix** for more information on maintenance of roofing systems.)*

Use this checklist as a guide for auditing building elements and performing appropriate PM procedures. Note deficiencies and required maintenance and repair at the end of this checklist. Check each box when the item has been inspected and any necessary PM tasks have been performed.

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- ☐ **Supporting structural integrity** for deficiencies such as cracks, moisture stains, and potential failure
- ☐ **Flashing condition** for deficiencies such as water penetration, displacement, oxidation, excessive stretching, delamination, and tearing
- ☐ **Surface condition** for deficiencies such as contaminants (such as exhaust or vegetation buildup)
- ☐ **Subsurface condition** (including insulation) for signs of moisture penetration
- ☐ **Membrane condition**
- ☐ **Chimney condition**
- ☐ **Parapet integrity**
- ☐ **Plumbing stack vent and roof connection condition**
- ☐ **Roof ventilation condition**

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Roofing

- ☐ **Skylight condition** for deficiencies such as broken glass or frames and flashing corrosion or rust
- ☐ **Structural condition** for deficiencies such as settling of the deck, membrane splits, or cracks in walls
- ☐ **Roof edging condition** for deficiencies such as deterioration and loose fasteners
- ☐ **Expansion joint condition** for punctures, splits, and insecure fasteners
- ☐ **Shingle condition**
- ☐ **Asphalt roof condition** for deficiencies such as brittle or missing shingles, cracking, curled edges, erosion, or exposed wood
- ☐ **Tile roof condition** for deficiencies such as deteriorating mortar joints, exposed felt, missing wind locks, or missing or cracked tiles
- ☐ **Wood shingle roof condition** for deficiencies such as bare spots, curled or missing shingles, decay, dry rot, or mildew
- ☐ **Flat roof condition** for evenness across the horizontal plane and deficiencies such as bare areas, blisters, cove areas abutting parapets, cracks, curling, exposed nail heads, or ponding
- ☐ **Overall condition**
- ☐ **Other**

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Roofing

Deficiency Report

Check any categories that have deficiencies. Note specific issues and planned maintenance or repair tasks to address them.

- ☐ **Supporting structure**
- ☐ **Flashing**
- ☐ **Surfaces**
- ☐ **Subsurfaces**
- ☐ **Membranes**
- ☐ **Chimneys**
- ☐ **Parapets**
- ☐ **Plumbing stack vents and roof connections**
- ☐ **Roof ventilation**
- ☐ **Skylights**
- ☐ **Structural changes**
- ☐ **Roof edging**
- ☐ **Expansion joints**
- ☐ **Shingles**
- ☐ **Asphalt roofs**
- ☐ **Tile roofs**
- ☐ **Wood shingle roofs**
- ☐ **Flat roofs**
- ☐ **Overall condition**
- ☐ **Other**

Date
Initials

Gutters / Roof Drains

Drainage devices are important in protecting buildings from water intrusion and damage. The following annual preventive maintenance checklist applies to gutters, downspouts, scuppers, and roof drains. Maintenance personnel should ensure that these areas are free of debris, such as leaves and branches, and that large debris has also been removed from the roof. Missing or disconnected downspouts should be replaced or repaired immediately. If trees encroach on roof areas, perform the following tasks every six months.

Use this checklist as a guide for auditing building elements and performing appropriate PM procedures. Note deficiencies and required maintenance and repair at the end of this checklist. Check each box when the item has been inspected and any necessary PM tasks have been performed.

- ☐ **Mounting stability**
- ☐ **Bolt, screw, and strap condition**
- ☐ **Discharge area function** for proper drainage away from building
- ☐ **Joint condition and stability**
- ■ **Roof atrium drains**
  - ☐ Cleanliness
  - ☐ Caulking condition
  - ☐ Mounting stability
  - ☐ Overall condition for deficiencies such as blockage and cracks
- ☐ **Splash block location**
- ☐ **Seam and elbow condition**
- ☐ **Caulking condition**
- ☐ **Gutter positioning toward downspouts**
- ☐ **Cleanliness** of gutters and roof drains to provide proper drainage
- ☐ **Overall condition** for deficiencies such as corrosion, rust, blockage, obstructions, and disconnection
- ☐ **Other**

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Date

Initials

Gutters / Roof Drains

Deficiency Report

Check any categories that have deficiencies. Note specific issues and planned maintenance or repair tasks to address them.

- ☐ **Mounting**
- ☐ **Bolts, screws, and straps**
- ☐ **Discharge area**
- ☐ **Joints**
- ☐ **Roof atrium drains**
- ☐ **Splash blocks**
- ☐ **Seams and elbows**
- ☐ **Caulking**
- ☐ **Gutter positioning**
- ☐ **Cleanliness**
- ☐ **Overall condition**
- ☐ **Other**

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Sewer Laterals

All drain lines in the facility connect to the main drain, which is referred to as the "sewer" beyond the foundation. All sewer lines outside of the foundation have clean-out points at various locations. Reaming from these points requires the use of a high-power hose, hydro-jet, or power equipment. Sewer laterals should be annually reamed from clean-out points by in-house personnel.

Use this checklist as a guide for auditing building elements and performing appropriate PM procedures. Note deficiencies and required maintenance and repair at the end of this checklist. Check each box when the item has been inspected and any necessary PM tasks have been performed.

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- ☐ **Caulking condition** adjacent to building exit point
- ☐ **Plug condition**
- ☐ **Pipe integrity**
- ☐ **Plaster condition** adjacent to building exit point
- ☐ **Overall condition** for deficiencies such as soil erosion (if line exits from ground)
- ☐ **Other**

Date

Initials

Sewer Laterals

Deficiency Report

Check any categories that have deficiencies. Note specific issues and planned maintenance or repair tasks to address them.

- ☐ **Caulking**
- ☐ **Plugs**
- ☐ **Pipes**
- ☐ **Plaster**
- ☐ **Overall condition**
- ☐ **Other**

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Irrigation Controllers

Annual inspection of each irrigation controller helps guarantee proper operation. This should be done jointly with a landscape contractor. *(See also monthly **Landscape** checklist for irrigation systems.)*

Use this checklist as a guide for auditing building elements and performing appropriate PM procedures. Note deficiencies and required maintenance and repair at the end of this checklist. Check each box when the item has been inspected and any necessary PM tasks have been performed.

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- ☐ **Timer accuracy**
- ☐ **Housing condition** for deficiencies such as water encroachment
- ☐ **Door and lock function and condition**
- ☐ **Electrical connection condition**
- ☐ **Security** (stations should be locked)
- ☐ **Overall condition**
- ☐ **Other**

Date

Initials

Irrigation Controllers

Deficiency Report

Check any categories that have deficiencies. Note specific issues and planned maintenance or repair tasks to address them.

- ☐ **Timer**
- ☐ **Housing**
- ☐ **Doors and locks**
- ☐ **Electrical connections**
- ☐ **Security**
- ☐ **Overall condition**
- ☐ **Other**

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Storm Drains

Storm drains or sewers are underground systems used to collect and dispose of surface water. They carry large quantities of water away from paved surface areas, and should be kept clean to prevent the accumulation of dirt and debris. They should be cleaned and flushed annually to ensure blockages are removed and piping is functional. If drains tend to become clogged frequently, they should be inspected and cleaned more often.

Use this checklist as a guide for auditing building elements and performing appropriate PM procedures. Note deficiencies and required maintenance and repair at the end of this checklist. Check each box when the item has been inspected and any necessary PM tasks have been performed.

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- ☐ **Grate condition**
- ☐ **Cover condition**
- ☐ **Adjacent concrete or asphalt condition**
- ☐ **Drainage**
- ☐ **General safety conditions**
- ☐ **Overall condition** for deficiencies such as dirt buildup around drain area that might preclude proper directional flow
- ☐ **Other**

Date

Initials

Storm Drains

Deficiency Report

Check any categories that have deficiencies. Note specific issues and planned maintenance or repair tasks to address them.

- ☐ **Grates**
- ☐ **Covers**
- ☐ **Adjacent concrete or asphalt**
- ☐ **Drainage**
- ☐ **General safety**
- ☐ **Overall condition**
- ☐ **Other**

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Special Requirements

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This space is provided to list additional equipment, systems, and materials that are not covered in the "Annual" category of checklists, but fall into this interval of inspection frequency. Fill in the information about the equipment, components to be inspected, and any necessary PM tasks. Check each box when the item has been completed.

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