820
NFPA® 820
Standard for Fire Protection in
Wastewater Treatment
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Handbook 2012
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NFPA® 820 Standard for Fire Protection in Wastewater Treatment and Collection Facilities Handbook 2012

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NFPA[®] 820

Standard for

Fire Protection in Wastewater Treatment and Collection Facilities

2012 Edition

This edition of NFPA 820, *Standard for Fire Protection in Wastewater Treatment and Collection Facilities*, was prepared by the Technical Committee on Wastewater Treatment Plants. It was issued by the Standards Council on May 31, 2011, with an effective date of June 20, 2011, and supersedes all previous editions.

A tentative interim amendment (TIA) to Table 6.2(a) was issued on August 11, 2011. For further information on tentative interim amendments, see Section 5 of the NFPA Regulations Governing Committee Projects available at: http://www.nfpa.org/assets/files/PDF/CodesStandards/TIAErrataFI/TIARegs.pdf

This edition of NFPA 820 was approved as an American National Standard on June 20, 2011.

Origin and Development of NFPA 820

The Committee on Wastewater Treatment Plants was organized in 1983 to have primary responsibility for documents on safeguarding against the fire and explosion hazards specific to wastewater treatment plants and associated collection systems. This document includes the hazard classification of specific areas and processes. The need to develop NFPA 820 was based on fire or explosion incidents that, while infrequent, are relatively severe when they do occur. Initial work on the document was begun early in 1985 and resulted in the first edition being issued in 1990. Extensive changes were made between the first edition and the 1992 edition, with the most notable revision being the document title, which was changed from *Recommended Practice for Fire Protection in Wastewater Treatment Plants* to *Recommended Practice for Fire Protection in Wastewater Treatment Plants*. In addition, the document scope was revised to include storm sewer systems and their appurtenances.

In 1995 the document was changed from a recommended practice to a standard, which contains mandatory requirements. This was done because NFPA 820 was widely referenced by various jurisdictions.

The 1999 edition of NFPA 820 was changed to include some editorial corrections and to make the document more enforceable. The definitions were also modified to conform to NFPA's *Manual of Style*.

For the 2003 edition, the entire document was reformatted to conform to the *Manual of Style for NFPA Technical Committee Documents*. Definitions were revised to conform to the NFPA *Glossary of Terms*.

The 2008 edition included guidance on waste gas burners and enclosed aeration basins. Definitions were coordinated with the NFPA *Glossary of Terms*.

The 2012 edition incorporates editorial changes to Table 5.2, Table 6.2(a), and Table 6.2(b). A new definition has been added for waste gas burners, and mitigation steps to Section 10.11 on fire and explosion prevention control procedures. Ventilation requirements and supporting language have been revised to provide clarity and to tie in with an effort to better coordinate with associated industry documents.

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Committee Scope: This Committee shall have primary responsibility for documents on criteria for safeguarding against the fire and explosion hazards specific to wastewater treatment plants and associated collection systems, including the hazard classification of specific areas and processes.

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NFPA 820

Standard for

Fire Protection in Wastewater Treatment and Collection Facilities

2012 Edition

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Information on referenced publications can be found in Chapter 2 and Annex F.

Chapter 1 Administration

▲ 1.1 Scope.

▲ 1.1.1* General. This standard shall establish minimum requirements for protection against fire and explosion hazards in wastewater treatment plants and associated collection systems, including the hazard classification of specific areas and processes.

1.1.2 This standard shall apply to the following:

- (1) Collection sewers
- (2) Trunk sewers
- (3) Intercepting sewers
- (4) Combined sewers
- (5) Storm sewers
- (6) Pumping stations
- (7) Wastewater treatment plants
- (8) Sludge-handling facilities
- (9) Chemical-handling facilities
- (10) Treatment facilities
- (11) Ancillary structures (see 3.3.60.1)

- 1.1.3 This standard shall not apply to the following:
- Collection, treatment, or disposal of industrial wastes or manufactured by-products that are treated on-site and not discharged to a publicly or privately operated municipal facility
- (2) On-site treatment systems (see 3.3.61.1)
 - (3) Pressure sewer systems (see 3.3.54.8)
 - (4) Building drain systems and appurtenances (see 3.3.5)
 - (5) Industrial sewer systems and appurtenances (see 3.3.54.5)
 - (6) Personnel safety from toxic and hazardous materials or products of combustion
 - (7) Separate nonprocess-related structures (see 3.3.60.2)

1.2 Purpose.

1.2.1 The purpose of this standard shall be to provide a degree of fire and explosion protection for life, property, continuity of mission, and protection of the environment.

1.2.2 The purpose of this standard shall be to reduce or eliminate the effects of fire or explosion by maintaining structural integrity, controlling flame spread and smoke generation, preventing the release of toxic products of combustion, and maintaining serviceability and operation of the facility.

1.3 Application.

1.3.1* New Installations. The requirements of this standard shall apply to new installations.

1.3.1.1 When additions or modifications are made to existing facilities, the modifications shall reflect the requirements of this document.

▲ 1.3.1.2 In any event, the requirements of this standard shall be used by owners in a risk assessment to identify the areas of a treatment plant that are vulnerable to fire or other loss.

1.3.2 Toxicity and Biological Hazards.

1.3.2.1 This standard shall apply to the fire and explosion hazards of various substances associated with wastewater treatment and conveyance.

▲ 1.3.2.2 This standard shall not apply to toxicity and biological hazards.

CAUTION: It is recognized that, from a personnel safety standpoint, toxicity and biological hazards can be present in life-threatening concentrations while no threat of fire or explosion exists.

1.3.3 Fire Risk Evaluation. A fire risk evaluation shall be initiated early in the facility design or alteration to integrate the fire prevention and fire protection requirements described in this document.

1.3.4 Ventilation Practices. Ventilation rates required by this standard shall be to minimize fire and explosion hazards, because insufficient ventilation rates can expose personnel to toxic and biological hazards.

1.3.5 Materials Selection. When conditions or applications warrant the selection of combustible, limited-combustible, or low flame spread materials, the fire risk evaluation shall include evaluation of flame spread, smoke generation, and the impact that a fire or explosion will have on the structural integrity of the facility.

CAUTION: Because many of the corrosion-resistant materials and coatings are combustible or limited-combustible and could represent a considerable fuel load during fire events, the design and fire risk evaluation shall consider any additional hazards imposed by the use of these materials.

