



**NFPA 1 and
The New Connecticut Supplement
Part II: Connecticut State Fire Prevention Code**

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for the*

*Office of Education and Data Management
Fall 2015 Career Development Series*

Connecticut State Fire Prevention Code



- How do we get there?
 - CGS 29-291a – 29-291d
- Current Effective May 7, 2015
 - Available on the Secretary of State Web Site
 - Master File No. 6184
 - http://www.sots.ct.gov/sots/lib/sots/regulations_recentlyadopted/ecopy_reg_6184.pdf
 - 'CT amendments'
 - Base Document NFPA 1 'Fire Code' (2012 ed)



CSFPC

- CGS 29-291a (a) Fire Prevention Code Adoption & Revision
 - SFM & Advisory Committee - adopt & administer
 - Based on a nationally recognized FP code
 - Purpose to enhance the enforcement capabilities of local fire marshals for the purpose prevention of:
 - Fire
 - Other related emergencies
 - Revised as deemed necessary
 - SFM may issue official interpretations upon request of any person, complete an index and publish at intervals not exceeding 4 months.



CSFPC

- CGS 29-291b Variations, Exemptions, equivalent or Alternative Compliance
 - Modification process – same as the CSFSC. Key words ... **may grant**..
 - Practical difficulty,
 - Unnecessary hardship,
 - Adjudged unwarranted
 - LFM to forward within 15 (business) days
 - LFM comments on the merits
 - Objective: secure public safety

CSFPC

- CGS 29-291c (a) & (b)
 - Abatement, injunction, citation, penalties
 - Abatement == same as the CSFSC = Directive 3
 - Remedied by owner or occupant
 - Remedy in conformance w/ BC, ordinances, rules and regulations of the municipality
 - Criminal (sub e) & civil penalties (\$50/day)
 - ‘reasonable’ time for abatement specified by FM
 - If not notify prosecuting atty. for district
 - Injunctive process for municipality

CSFPC

- ▶ 29-291c (c) (d) & (e)
- ▶ Abatement, injunction, citation, penalties (Cont.)
- ▶ Citation –
 - ▶ **Alternative** to abatement order- LIMITED
 - ▶ Limited sections of FPC can be enforce by citation (29-291a-10a)
 - ▶ Once every 6 months for the same violation
 - ▶ JD-CR-2
 - ▶ Class to use
 - ▶ Fine NMT \$250.00
 - ▶ Centralized Infraction Bureau
 - ▶ 90% back to town
 - ▶ Cited as 29-291c (c)
- ▶ Abatement penalty if abatement not complied with: \$200 – \$1000 or 6 mos. or both

CSFPC

- CGS 29-291d
 - SFM review of LFM decision; Appeal
 - SFM to review LFM decision on matters pertaining to the CSFPC upon the request of any person determined to have the right to appeal OR when the SFM has reason to believe LFM has misconstrued or misinterpreted the code.
 - Issue determination / order
 - To LFM, in writing, registered mail
 - Any person appeal to the SFM decision to the superior court for the jurisdiction where the premises is located.

CSFPC

- Regulation of Connecticut State Agencies.
 - 29-291a-1a through 29-291a-10a
 - Connecticut State Fire Prevention Code
 - Effective May 7, 2015



CSFPC

- Section 29-291a-1a
 - Title & Administration
 - Severability
 - Validity
 - Administered as provided by CGS Chap 541
 - Does not apply to
 - Federal property exemption
 - Does not apply to detached 1 & 2 Family dwellings nor multiple single family dwellings side-by-side (townhouse) not more than 3 stories in height having separate means of egress.
 - Note: Townhouse construction is found in IRC R302.2, determined by the Building inspector

CSFPC

- Section 29-291a-2a
 - Relationship to State Fire & Building Codes
 - FPC shall NOT supersede the requirements of the CSFSC or the CSBC. i.e. Does NOT replace FC/BC.
 - If a conflict/duplication, the CSFSC or CSBC prevails
 - Where CSFSC or CSBC do not address or have a deleted a provision on an issue the FPC shall apply.

CSFPC

- Can not remove/modify a Fire Protection System installed & maintained under the CSFSC or CSBC, unless otherwise permitted by those codes.
- Maintain building in safe conditions
- Devices or safeguards required by the CSFSC or CSBC shall be maintained in conformance with edition of the code to which they were installed to.

CSFPC

- Section 29-291a-3a
 - Scope of the FPC – 11 Items
 - Inspection of permanent & temporary buildings, processes, equipment, systems, & other fire and related life safety situations.
 - Review of plans, specs for life safety systems, FP systems, access, H₂O supply, processes, and hazardous materials, & other fire and life safety issues.
 - Fire & Life Safety education of fire brigades, employees, responsible parties & the general public.
 - Existing occupancies & conditions
 - Access requirements for FD operations
 - Hazards from outside fires in vegetation., trash, building debris, & other materials.
 - Regulations and control of special events including but not limited to – assemblage of people, exhibits, trade shows, amusement parks, haunted houses, outdoor events, & other similar special temp & permanent occupancies.

CSFPC

- Section 29-291a-3a - Scope - cont'd
 - Interior finish, decorations
 - Storage, Use, Processing, handling & on-site transportation of Flam & Comb gasses, liquids and solids
 - Storage, Use, Processing, handling & on-site transportation of hazardous materials
 - Conditions affecting FF safety

CSFPC

- Section 29-291a-4a
 - AHJ
 - SFM – administration, application, interpretation, and modification
 - LFM – initial determination for compliance, except:
 - Expressly provided by the wording of a section.
 - State property - SFM
 - LFM decision/determination may be reviewed by the SFM (CGS 29-291d)
 - Local Ordinance - LFM is the AHJ, no appeal to SFM

CSFPC

- Section 29-291a-5a
 - Buildings, facilities, properties with variations granted by CGS are deemed in compliance with this code.

CSFPC

- Section 29-291a-6a
 - Abatement / Penalty
 - Conditions contrary to code - Follow CGS 29-291c
 - Order to vacate 'severe hazard condition' - LFM / LPD by 29-306
 - '5 Deadly sins'
 - Penalty see CGS 29-291c / 29-295 as appropriate
 - Citation – See 29-291a-10a

CSFPC

- Section 29-291a-7a
 - Inspection / Plan Submittal
 - Inspection per 29-305 in buildings and facilities regulated b the CSFPC
 - Frequency Schedule (same as 2009 amendments to the state fire safety code)
 - Annual
 - All R's; A-1; A-2; E; H-1; and I-1
 - Every 2 years
 - A-3; H-2; I-2; I-3, I-4; B-medical; B-college
 - Every 3 years
 - B; H-3; M; S-1; A-4; A-5
 - Every 4 Years
 - F-1; F-2; H-4; H-5; S-2; U

CSFPC

- Section 29-291a-7a == cont'd
 - Inspection during construction same as fire code
 - Plans submittal same as fire code
 - Fee schedule
 - Municipality or fire district may as required by law adopt a fee for construction document review.
 - Must be posted in public view.

CSFPC

- Section 29-291a-8a
 - Adopted Standard
 - NFPA -1, 2012 edition
- Section 29-291a-9a
 - Connecticut Amendments
 - Amd, Del, Add
 - ERATTA to correct Typo's
- 29-291a-10a
 - Enforcement by citations
 - at the end of the document

CSFPC

29-291a-10a Alternative Enforcement Method

► Citation Process

- 10 issues
 - 1.12 Operating w/o a permit as prescribed by law
 - 10.15.9 Naturally cut Christmas Tree
 - 10.8, 13.17 failure to maintain or shutting off fire protection or warning system
 - 14.4.1, 14.4.3, 14.4.3.1 Blocked, insufficient, egress
 - Chapter 16 Safeguards during building construction
 - 20.1.4.8.3 Exceeding occupancy limits
 - 20.12.2.4 Storage & display of consumer fireworks
 - Chapter 41 Hot work operations
 - 50.5 Use & maintenance of commercial cooking
 - 65.11.1.5 Retail sales of consumer fireworks

Chap 1 Administration (Heavily Amended)

- Goal to keep CT amendments as short as possible.
 - References to NFPA 101 mean CSFSC
 - References to NFPA 5000 mean SBC
 - References to New Occupancies means CSFSC Part III and SBC for new occupancies.
 - Repairs/Renovations/Alterations/reconstruction/ Change of Occupancy/ Additions conform to CSFSC & SBC.
 - As with fire and building codes can accept others reports.

Chap 2 Referenced Standards

- Modified to coordinate with the CSFSC and SBC
- Regulations of other agencies
- Thomas Commission Recommendations NFPA 56

Chap 3 Definitions

- Added/ Amended to coordinate with those in the CSFSC and SBC.
- Many mis-numberings - Eratta

Chap 4 & 5

- Delete Both
- Chap 4 General Requirements
 - More theoretical and conceptual than enforceable language.
- Chap 5 Performance Based Design
 - Concept addresses new construction, more appropriately addressed in CSFSC.

Chap 6 Classification of Occupancy

- Errata – Originally deleted chapter, (Mistaken as ‘reserved’) with no substitution language.
- Referenced to the classifications in the CSFSC.
 - Consistent application between CSFSC and CSFPC with respect to the classification of occupancy.

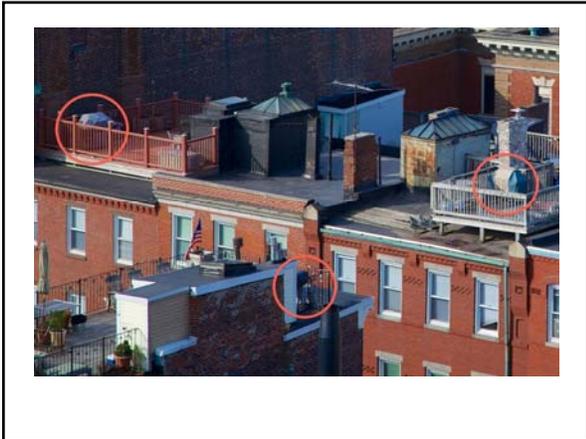
Chap 10 General Safety Requirements

- Many amendments to coordinate with the CSFSC and SBC.
- Issues affecting FF safety
- Deleted items with respect to open fires
 - DEEP



Chap 10 - Hot Topic Grills on Decks

- 10.11.6 Cooking Equipment Except 1 & 2 family & (Townhouses)
 - Hibachi, grill, similar device used for cooking, heating, other purpose
 - Removed ‘gas fired’, ‘charcoal’
 - Not Kindled on a balcony, under an overhang, within 10 ft. of a structure
 - Not Stored in similar locations.
 - Exception: Listed Equipment – Permanently installed – instructions/listing
 - Removed exception for electric Grills
 - Working on a Guideline
 - Handbook Commentary – still refers to ‘charcoal’ and ‘gas’ grills, fireplaces.
 - 2012 added storage, for, if you store you will use





Chap 10 - Hot Topic - Patio Heaters

- 10.11.7
 - Integral LP Gas containers > 1.08 lb.
 - Listed, Installed w/ manufacturers instructions
 - > 5 ft. from exit of assembly occupancy.

What is it? Permitted?



Answer

- Listed Patio Heater



Chap 10 - Hot Topic –Crop Mazes

- 10.15.11
- Owner/Operator advise staff on safety rules
- Provide safety instructions to guests before entering
- Minimum of two employees on duty when maze is open
- 10' elevated platform
 - Electronic observation; personnel stationed in the maze with communications
- Contact local FD to see if they want to preplan
- No motorized vehicles parked within 75 feet of maze
 - Fuel break 20 ft wide between maze and parking area
- Method to make announcements
 - PA, Bullhorn
- Keep entrance/exit clear
- 200 people per acre (43560 ft²; 1 person per 218 ft²) occupant load
- No open flame devices or smoking within the maze



Chap 11 Building Services

- Elevators are addressed by the elevator code.
- Acknowledged that existing approved HVAC systems may be continued in service.
- Coordinated kerosene burners and oil stove requirements to the CGS
- Deleted 2-Way radio communication equipment systems
 - Belongs in the CSFSC, SBC it is a construction requirement.
- 11.12.2.2.2 PV roof access.

Chap 12 Features of Fire Protection

- Coordinated to match CSFSC for ratings.
- Mostly maintenance provisions.
- 12.4.6.8 Functional door testing.
 - Checklist excerpted from NFPA 80.



Chap 13 Fire Protection Systems

- Deleted “where required” sections
- Clarified that systems shall be maintained to provide at least the same level of performance and protection to which they were designed.
- Added maintenance requirements to NFPA 13D systems
- Amended requirements for PFE’s
 - Other parts of this code
 - By referenced standards
 - Outside & immed adjacent to special haz areas; health care incl I1 & I2; B-med; staff loc. I3 (locked); R1 B&B (CSFSC); commercial cooking.
- Amended smoke alarms to conform to statute
- Amended CO alarms to be maintained to NFPA 720

Chap 14 Means of Egress

- Matched requirements of Part IV CSFSC



Chap 15 FD Service Delivery

- Delete Chapter



Chap 16 Safeguards During Construction, Alteration, & Demo

- CSBC Chap 33
 - Construction safeguards, Demo, site work, sanitary, pedestrians, adjoining property, temp use of alleys/public property, PFE, exits, standpipes, A/S.
- NFPA 241
 - CSFPC has other requirements not addressed in CSBC.
 - Temp Heat, waste disposal, F&C liquid & gas storage, FF access (preplans) , PFE, Torch applied roofing, tar kettles.
 - Deleted Exits (CSBC) security service, ...

Chap 17 – Wildland Urban Interface

- Delete Chapter
 - No area in CT conforms to definition.



Chap 18 – FD Access (& Water Supply)

- Reminder GCS 29-293
 - The State Fire Prevention Code shall, and any municipality may, by ordinance, require the establishment of one or more fire zones for the orderly access of fire and other emergency equipment to buildings or facilities open to the public. Any such ordinance may be in accordance with the (1) size, type of construction and nature of use or occupancy of such buildings or facilities, and (2) the fire suppression equipment and method of attack utilized by the fire department.
- FD Access
 - Plans (FD access & Hydrants)
 - "Knox Boxes", Access roads (width, grade, turning radius, surface/weight, d/E, bridges), Access to buildings (50'); reach 150' - 450' w/AS.
- Deleted Water

Chap 19 – Combustible Waste & Refuse

- Deleted Vehicles transporting
- Dumpsters 1.5 cu. Yds > 10 " from combustible wall openings, roofs, eaves



Chap 20 – Occupancy Fire Safety

- Overall Coordinated classifications w/ CSFSC Part III
- Broken down by occupancy classifications.
- Added 'permits' to all occupancies
- Deleted inspection of door openings

- Covered Mall Buildings –
 - Lease Plan – approval, revisions
 - Tenant ID
 - Vacant Space maintenance



Chap 20 by Occupancy

- Assembly
 - Add Stage Standpipes
 - Amd Pre announcement
- Educational
 - Amd Drills
 - Room Locations
- Health Care
 - Add Alcohol based hand rub solutions
- Dorms & Hotels & LR
 - Amd Instructions for guests

Chap 20 by Occupancy

- Mercantile
 - Add Covered Mall Buildings –
 - Lease Plan – approval, revisions,
 - Tenant ID
 - Vacant Space maintenance
 - Add Storage & Display of consumer Fireworks (sparklers & Fountains)
 - NFPA 1124 (2006) Amended section 7.5.3 Storage rooms
 - Visual supervision
 - >5' entrance/exit enclosed building/structure

Chap 20 by Occupancy

- Amd Industrial/Factory
 - Amd H5 (semiconductor fabrication & RD, Hazardous Production Materials Used)
 - Add Plans & Diagrams
 - Add Plan Updating
 - Add Emergency Response Team
 - Add Emergency Drills
- Del Bulk Storage Elevators & Historic Buildings /Cultural Resources

Chap 21 – Airports/Heliports

- Amd Construction in accordance with CSFSC
 - References to NFPA 415 & 418
- SBC 412



Chap 22 – Automobile Wrecking Yards

- Amd Burning Operations
 - Comply with DEEP Regs.
- Welding & Cutting
- FD Access Roads
- MV fluids & HM



Chap 23 – Clean Rooms

- Chapter 23 Cleanrooms
- Not much impact. Limited scope



Chap 24 – Dry Cleaning

- Adopt NFPA 32
- Stays the same



Chap 25 – Grandstands, Bleachers, Folding & Telescopic Seats, Tents, Membrane Structures

Amd Refers to CSFSC Part III Chapter 2400

Temporary - Part III section 2404 – 29-292-1e (c)

The provisions of sections 29-292-1e to 29-292-25e, inclusive, of the Regulations of Connecticut State Agencies shall only apply to temporary tents, temporary portable shelters and temporary tension-membrane structures as defined in Section 2402 of section 29-292-17e of the Regulations of Connecticut State Agencies to the extent called for by the regulations adopted under the authority of section 29-140 of the Connecticut General Statutes, known as the Connecticut Tent and Portable Shelter Code.

Open Flame, Cooking Ops, PFE, Heaters in Tents, No sparklers/fountains

Air Support/Air Inflated Do Not Apply to things defined in Rides Regs.

Missed some items – need to address

Chap 26 – Labs Using Chemicals

- Refers to NFPA 45
- Plans and Procedures Established



Chap 27 – Manufactured Homes & RV Sites

- Delete Chapter



Chap 28 – Marinas Boatyards, Marine Terminals, Piers, Wharves

- Amd Scope
- NFPA 303



Chap 29 – Parking Garages

- CSBC 406
- NFPA 88A



Chap 30 – Motor Fuel Dispensing Facilities & Repair Garages

- CSFSC Part III 401.6 >>> CSBC 406 (MV Related Occupancies)
- NFPA 30A
- 30.1 Motor Fuel Dispensing Facilities
- 30.2 Repair Garages
- 30.3 Operational requirements



Chap 31 – Forest Products

- No CT changes
- Operational fire prevention
- Exposure protection



Chap 32 Motion Picture / TV

- NFPA 140



Chap 33 – Outside Storage of Tires

- No Changes by CT
- Control Ignition Sources
- Size of Piles
- Emergency Response Plan
- Manual FF equipment
 - PFE
 - Rakes
 - Shovels
 - Pike Pole
- Site Access



Chap 34 – General Storage

- Applies to indoor & outdoor
 - List of items not applicable
 - Classification of commodities
 - Storage arrangement
 - General fire protection
 - Water based, IMT to NFPA 25
- Del Security Service
- Del Rubber Tires
- Del Roll Paper



Chapters w/No CT Changes

- 35 – Animal Housing Facilities === NFPA 150
- 36 – Telecom & IT Equipment === NFPA 76 & 75
- 40 – Dust Explosion & Fire Prevention === NFPA 61, 69, 85, 120, 484, 654, 655, 664.
- 41 – Welding, Cutting, Hot Works
 - NFPA 51B (HC Code)
 - Management/Responsibility
 - Fire watch
 - Permissible/Designated Areas
 - Hot Work Permit



Chap 42 - Refueling

- Amd Scope to reference CSFSC, CSBC, Reference NFPA 30A
- Reminder, Repair Garages see Chap 30 of this code

Chapter 43 - Spraying, Dipping, and Coating Using Flammable & Combustible Materials

- Amd Application to reference CSFSC, CSBC, Reference NFPA 33, & 43.1 of this code.
- CSBC 416
- CSFSC Part III Chap 15 (09 amd)



Chap 44 – Solvent Extraction

- No CT Changes
- NFPA 36
- Commercial Scale Extraction
 - Class I Hydrocarbon Liquids

Chap 45 – Combustible Fibers

- Del requirement that the AHJ make the designation of classified (hazardous) areas for electrical work.
- Del Storage of Hay, straw, Similar agricultural products.

Chapter 50 – Commercial Cooking Equipment

- Amd Clarify applies to operation, inspection, & Maintenance ONLY, also does not apply to Type II (heat) hoods.
- Errata correction to sections 14.8 & 14.9 are of NFPA 96, NOT this code.



No Connecticut Changes

- Chap 51 – Industrial Ovens
 - NFPA 86, 86C, & 86D
- Chap 52 – Stationary storage battery systems
 - CSFSC Part III 608, 609 (certain types of batteries)
 - Signs
- Chap 53 – Mechanical refrigeration
 - CSBC Chap 28, Ref IMC Chap11
 - References the mechanical code
 - Threshold for application based on:
 - Quantity of and Class of refrigerant
 - ID valves and Switches, sequence to be followed in an emergency.
 - NFPA 704 markings on outside of control box.
- Chap 54 – Ozone Gas Generating Equipment

Chap 58 – Gas Equipment & Piping

- Connecticut took a ‘reserved’ chapter
- Reference CSFSC, CSBC, NFPA 54
- Define what a fuel gas is

Chapter 59 – Fire & Explosion Prevention During Cleaning & Purging of Flammable Gas Piping Systems

- Connecticut took a ‘reserved’ chapter
- Thomas/Nevis Commissions (KLEEN Energy)
- References CSFSC, CSBC
- Reference NFPA 56 (new standard)
- Defines coverage area
 - Pt of delivery to gas equipment isolation valve

Chapter 60 – Hazardous Materials

- References CSFSC, CSBC
 - CSBC 414, 415
 - NFPA 400
- MAQ Tables

Chapter 61 – Aerosol Products

- References CSFSC, CSBC, NFPA 30B
- CSFSC - silent



Chapter 63 – Compressed gasses & Cryogenic Fluids

- References CSFSC, CSBC, NFPA 55
- CSFSC = silent
- CSBC under 415 (H1 to H5)

Chapter 65 Sparklers & Fountains and Flame Effects Before a Proximate Audience

- NFPA 160 Flame Effects Before a Proximate Audience
 - Approved by SFM
- Safe Handling & Storage of Sparklers & Fountains
 - NFPA 1124
- Special Limits for the Retail sale of Sparklers & Fountains
 - Type of CFRS facility
- Prohibit sale of Non-Complying Fireworks
- Deleted Display FW, Pyro before an audience, FW mfg.
- Ref CSFSC for building issues

Chapter 66 – F&C Liquids

- Reference CSFSC, CSBC, NFPA 30
 - CSBC 415.3 (H)
- CGS 29-320



No Connecticut Changes

- Chap 67 – Flammable Solids
- Chap 68 – Highly Toxic and Highly Toxic Solids and Liquids
 - Both reference NFPA 400 Hazardous Materials Code
 - Both reference Chap 60 (HM)

Chapter 69 – LPG / LNG

- Added reference to CSFSC, CSBC
- Reference NFPA 58
- Add requirements for written emergency plan
 - Industrial plants, bulk plants, dispensing stations
 - Fire safety analysis found in NFPA 58 6.25
- Add Name & contact info on or near LP tanks
 - At least 1/2 " high, phone staffed 24 hrs
- Add containers, tanks, cylinders evacuated & transported only by owner or with his permission.

No Connecticut Changes

- Chap 70 – Oxidizer Solid & Liquid
- Chap 71 – Pyrophoric Solids and Liquids
- Chap 72 – Unstable (Reactive) Solids and Liquids
- Chap 73 – Water Reactive Solids & Liquids
- Chap 75 – Organic Peroxide Solids and Liquids
 - Reference NFPA 400 Hazardous Materials Code
 - Reference Chap 60 (HM)
- CSBC addresses in Table 307(MAQ Table)
 - See 307.9 – Exceptions to be classified as a Group H occupancy
 - Under the Table amount

Chapter 74 – Ammonium Nitrate

- Amd Reference CT Explosives Code
 - Reference NFPA 400 Hazardous Materials Code

29-291a-10a Enforcement by Citations

- Same as previous
 - FM Only can sign
 - **Alternative** to abatement order
 - Directive #3
 - Fine \$200 - \$ 1000 and or 6 months CGS 29-291c (e)
 - Civil penalty \$50.00/day recovered in the name of the state.29-291c (a)
 - LIMITED - Scope & Application
 - Once every 6 months for the same violation
 - FPC Articulates specific code sections
 - Use JD-CR-2 Complaint Ticket
 - Signed by FM and person
 - Fine NMT \$250.00
 - 90% back to municipality

29-291a-10a Enforcement by Citations

- **29-291a-10a New Enforcement Method**
 - Citation Process
 - 10 issues
 - 1.12 Operating w/o a permit
 - 10.15.9 Naturally cut Christmas Tree
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