

# Town of Windham

Planning Department  
8 School Road  
Windham, ME 04062

voice 207.894.5960

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## MEMO

DATE: September 6, 2018

TO: Windham Town Council  
THROUGH: Tony Plante, Town Manager  
FROM: Amanda Lessard, Planner *AL*  
Cc: Brent Libby, Fire-Rescue Chief  
Chris Hanson, Director of Code Enforcement

RE: Planning Board Recommendation - Ordinance Amendment – Chapter 140 Land Use Sections 500 & 900, related to residential sprinkler systems

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At the Planning Board's meeting on August 27, 2018, a public hearing was held on the proposed ordinance changes that would remove requirements for residential sprinkler systems from the Land Use Ordinance and clarify when additional water storage capacity for firefighting purposes is required in subdivisions.

No members of the public spoke for or against the proposed amendment.

During Planning Board discussion members of the Board commented that residential sprinkler systems were the best method of fire protection in areas not served by public water as it is the best option for life safety. The Board also noted that other methods of fire protection (cisterns and fire ponds) provide a water source for fire protection that could be utilized for a wider area than just the new development.

Following discussion of the proposed changes, the Board made the following motion:

To recommend keeping the existing residential sprinkler requirements in Sections 500 and 900 and approving the amendments to Section 910.C.1 and Section 911..B.1.c.4 of the Land Use Ordinance, and to provide comments that the general feeling of the Board was to expand the requirement for residential sprinklers and that reference could be made in Section 911..B.1.c.4 to NFPA 1142 for rural water supply and NFPA 13 for sprinklers.

Motion: Bill Walker  
2<sup>nd</sup>: Griffin Bourassa

Vote: 6-1 (Keith Elder opposed)

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## MEMO

DATE: August 22, 2018

TO: Windham Planning Board  
FROM: Amanda Lessard, Planner *AL*  
Cc: Brent Libby, Fire-Rescue Chief  
Chris Hanson, Director of Code Enforcement

RE: Ordinance Amendment: Chapter 140 Land Use Sections 500 & 900, related to residential sprinkler systems  
Planning Board Meeting & Public Hearing – August 27, 2018

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The attached proposed ordinance language would remove requirements for residential sprinkler systems from the Land Use Ordinance and clarify when additional water storage capacity for firefighting purposes is required in subdivisions. The Board discussed the proposed amendments at their meeting on August 13, 2018.

### Summary of Proposed Ordinance Amendments:

#### Section 500

- 550.D.8.f.1.ii - Removes the requirement for all dwellings on dead end streets over 1,000 linear feet in length to have an NFPA 13D monitored sprinkler system.

#### Section 900

- 911.M.5.b.5.b - Removes the requirement for all dwellings on dead end streets over 1,000 linear feet in length to have an NFPA 13D monitored sprinkler system.
- 910.C.1 – Addition of preliminary plan submission requirement for major subdivisions to submit written approval from the Fire Chief of the proposed fire protection measures.
- 911..B.1.c.4 - Clarifies that the need for additional water storage capacity for firefighting purposes is in subdivisions located more than 1,000 linear feet from a PWD hydrant. Facilities may be ponds with dry hydrants, underground storage reservoirs, or other methods acceptable to the Fire Chief.

A public hearing is scheduled for the Planning Board meeting on August 27, 2018. After the public hearing and discussion by the Board, the Planning Board may vote on a recommendation to the Town Council similar to the following:

**MOTION:** To (**recommend/recommend with comments/not recommend**) approval of the proposed amendments to Sections 500 and 900 of the Land Use Ordinance, related to residential sprinkler systems.

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## MEMO

DATE: August 6, 2018

TO: Windham Planning Board  
FROM: Amanda Lessard, Planner *AL*  
Cc: Brent Libby, Fire-Rescue Chief  
Chris Hanson, Director of Code Enforcement

RE: Ordinance Amendment: Chapter 140 Land Use Sections 500 & 900, related to residential sprinkler systems  
Planning Board Meeting – August 13, 2018

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At their meeting on July 10, 2018, the Town Council asked to have amendments to the Town's Land Use Ordinance drafted to remove requirements for residential sprinkler systems.

### **Summary of Proposed Ordinance Amendments:**

#### Section 500

- 550.D.8.f.1.ii - Removes the requirement for all dwellings on dead end streets over 1,000 linear feet in length to have an NFPA 13D monitored sprinkler system.

#### Section 900

- 911.M.5.b.5.b - Removes the requirement for all dwellings on dead end streets over 1,000 linear feet in length to have an NFPA 13D monitored sprinkler system.
- 910.C.1 – Addition of preliminary plan submission requirement for major subdivisions to submit written approval from the Fire Chief of the proposed fire protection measures.
- 911..B.1.c.4 - Clarifies that the need for additional water storage capacity for firefighting purposes is in subdivisions located more than 1,000 linear feet from a PWD hydrant. Facilities may be ponds with dry hydrants, underground storage reservoirs, or other methods acceptable to the Fire Chief.

Also attached is information from the Fire-Rescue Chief about sprinkler systems generally and residential sprinklers in Windham.

### **Zoning Amendment Process**

The Planning Board must hold a public hearing prior to making a recommendation on this item to the Town Council. A public hearing has been scheduled for the Board meeting on August 27, 2018. The Town Council will need to vote on the proposed changes to the Land Use Ordinance for the changes to be officially approved.

nothing in this paragraph shall serve to limit the use of such private road for occasional use by and for agricultural purposes. Private Roads providing access to eleven (11) or more lots shall meet the standards for a "Major Private Road" contained in Table 3 and Table 4 of Appendix B Street Standards. When determining the number of dwelling units, the Code Officer shall not include permitted Accessory Apartments.

- (f) Dead End Streets. The following standards shall apply to dead end private roads. (See Sec. 300 for definition of "Dead End Street")

- (1) Maximum Length. Dead end private roads shall meet the following standards:

- (i) Private Roads Served by Public Water. There is no maximum length limit for private roads served by the Portland Water District that have fire hydrants and hammerhead turnarounds installed every 1,000 linear feet. However, the street connectivity standards of Subsection (g) below shall apply.
  - (ii) Private Roads Not Served by Public Water. Dead end Private Roads not supplied with fire hydrants served by the Portland Water District shall have a maximum length of 1,000 linear feet unless ~~all dwellings beyond 1,000 linear feet from the closest public street or private way, as defined, have a National Fire Protection Association (NFPA) 13D monitored sprinkler system installed and approved by the Windham Fire Chief and~~ hammerhead turnarounds are installed every 1,000 linear feet. The street connectivity standards of Subsection (g) below, shall apply.
    - 1. Existing Rights-of-Way. The maximum length of 1,000 linear feet shall commence at the terminus of any dead end rights-of-way existing on, or before, October 22, 2009.
    - 2. Any existing right-of-way which does not contain an improved private way existing on, or before, October 22, 2009 shall construct any future improvements in accordance with the standards for private roads contained in this Section 548 to the greatest extent practical.
- (2) Hammerhead Requirement: At a minimum, a hammerhead turnaround is required at the terminus of all dead end private roads.
- (i) All hammerhead turn around shall meet the following standards:
    - a) The right-of-way or easement area of the turnaround side branch shall be at least 50 feet by 50 feet.
    - b) The gravel or paved surface shall extend at least 50 feet from the centerline of the adjacent roadway.
    - c) The width of the gravel or paved surface shall be equal to the street width.
    - d) The hammerhead shall have a minimum 25 foot turning radius.

- (i) Minimum Shoulders for Curbed Streets. Standards shall be in accordance with Table 3 in Appendix B.
  - (ii) Construction Standards: Curbs shall be constructed of either vertical granite, sloped granite, sloped cape cod bituminous, or Type 2 bituminous where a sidewalk is adjacent to a street.
    - a) Curb radii at all intersections on a public street shall be constructed of granite.
    - b) Granite curb radii shall be installed in such a manner as to match the height of any existing curbing on a public street.
    - c) Granite curb radii shall be tipped down to match the grade of any existing external public street that is not curbed at the time of construction.
    - d) Granite curbing shall be installed in accordance with Maine DOT Section 609 Specifications.
- (4) Shoulders: See Subsection (6) Shoulders and Sidewalks, below.
- (5) Dead End Streets
- (i) Maximum Length. Dead end Streets, as defined, shall meet the following standards:
    - a) Streets and Roads Served by Public Water. There is no maximum length limit for streets served by the Portland Water District that have fire hydrants and hammerhead turnarounds installed every 1,000 linear feet. However, the street connectivity standards of Subsection (7) "Street Connection Requirements," below, shall apply.
    - b) Streets and Roads Not Served by Public Water. Dead end streets not supplied with fire hydrants served by the Portland Water District shall have a maximum length of 1,000 linear feet unless ~~all dwellings beyond 1,000 linear feet from the closest public street or private way, as defined, have a National Fire Protection Association (NFPA) 13D-monitored sprinkler system installed and approved by the Windham Fire Chief and~~ hammerhead turnarounds are installed every 1,000 linear feet. The street connectivity standards of Subsection (7) "Street Connection Requirements," below, shall apply.
  - 1) Existing Rights-of-Way. The maximum length of 1,000 linear feet shall commence at the terminus of any dead end rights-of-way existing on, or before, October 22, 2009.

- 2) A private road constructed within an existing right-of-way - which does not contain an existing private way constructed on, or before, October 22, 2009 - shall meet the design and construction standards for private roads contained in this Section 900 to the greatest extent practical. (*See definition of, "Street Classification: 'Private Way' and 'Private Road'"*)
- c) Industrial/Commercial Streets. There is no maximum length limit for a dead end industrial or commercial street, as defined in Section 300.
- (ii) Cul-de-sac Requirement. Except for the standards in Subsection 911.M.5.(b)(iv), below, dead-end streets shall be constructed to provide a cul-de-sac turn-around. The following standards shall be used in the design of cul-de-sacs:
  - a) Width. A single travel lane and width equal to the minimum width required for the internal subdivision street.
  - b) Radius. For all residential cul-de-sacs the minimum radius shall be 42 feet. For commercial/industrial cul-de-sacs the minimum radius shall be 55 feet.
  - c) Drainage. The center of the cul-de-sac must reserve area for snow storage and provide adequate drainage that does not result in ice formation on the travel way.
  - d) Center Area. The center of the cul-de-sac may include natural ground cover and vegetation.
  - e) Pedestrian and Utility Easement: The Board may require the reservation of a minimum twenty (20) foot easement in line with the street to provide continuation of pedestrian traffic to the next street, or a thirty (30) foot wide utility easement to provide continuation of utilities.
- (iii) Street Connectivity: The Board may require the reservation of a right-of-way easement equal to the right of way width of the internal subdivision street in line with the street to provide continuation of the road where future development is possible.
- (iv) Hammerhead Requirement: A hammerhead turnaround is permissible on all private roads, or on public streets at which the Planning Board has required an extension of a right-of-way to provide access to undeveloped land. (*See Subsec. 911.M.3 for additional street connectivity standards*)
- (v) A hammerhead turn around shall meet the following standards:

- (2) Evidence of payment of the application and escrow fees (*See Appendix A Fee Schedule*).
- (3) Proposed name of the subdivision and the name of the municipality in which it is located.
- (4) Verification of right, title or interest in the property, or any abutting property, by deed, purchase and sales agreement, option to purchase, or some other proof of interest.
- (5) A copy of the most recently recorded deed for the parcel. A copy of all existing deed restrictions, easements, rights-of-way, or other encumbrances currently affecting the property.
- (6) A copy of any existing or proposed covenants or deed restrictions intended to cover all or part of the lots or dwellings in the subdivision.
- (7) A copy of any proposed easements on the property.
- (8) The name, registration number and seal of the Maine Licensed Professional Land Surveyor who conducted the survey,
- (9) Name, registration number and seal of any other licensed professional in the State of Maine who prepared the plan (if applicable).
- (10) An indication of the type of sewage disposal to be used in the subdivision.
  - (i) When sewage disposal is to be accomplished by connection to the public sewer, a letter from the Portland Water District stating the district has the capacity to collect and treat the waste water shall be provided.
  - (ii) When sewage disposal is to be accomplished by subsurface waste water disposal systems, test pit analyses, prepared by a Maine Licensed Site Evaluator or Certified Soil Scientist shall be provided. A map showing the location of all test pits dug on the site shall be submitted.
- (11) An indication of the type of water supply system(s) to be used in the subdivision.
  - ~~(12i)~~ When water is to be supplied by public water supply, a written statement from the Portland Water District shall be submitted indicating there is adequate supply and pressure for the subdivision.
  - (ii) A written statement from the Fire Chief approving all hydrant locations or other fire protection measures deemed necessary.

- (1) Street line monuments shall be granite and have minimum dimensions of four (4) inches square at the top and four (4) feet in length. The monuments shall be set in the ground with the top of the monuments no more than six (6) inches above the final grade level. A drill hole at least 0.5 inch deep shall locate the point or points described above and include the registration number of the Maine Licensed Professional Land Surveyor that set the monuments. Monuments shall be capable of being detected by commonly used magnetic or electronic equipment, as required by the Maine Board of Registration of Land Surveyors.
  - (b) Other Monuments. All other subdivision boundary corners and angle points, as well as all lot boundary corners and angle points shall be marked by suitable permanent monumentation solidly embedded in the ground and capable of being detected by commonly used magnetic or electronic equipment, as required by the Maine Board of Registration of Land Surveyors. The monument shall clearly show the registration number or temporary certificate number of the Maine Licensed Professional Land Surveyor responsible for the survey. Where the placement of a required monument at its proper location is impractical, it shall be permissible to set a reference monument close to that point.
- B. Sufficient Water
  1. ***Water Supply***
    - (a) A subdivision shall connect to the public water system if the closest water main is within a distance equal to 100 feet multiplied by number of lots in the subdivision. A proposed subdivision shall not generate a demand on the source, treatment facilities or distribution system of the Portland Water District beyond the capacity of those system components, considering improvements that are planned to be in place prior to occupancy of the subdivision. The applicant shall be responsible for paying the costs of system improvements to the Portland Water District's system as necessary in order to facilitate connection.
    - (b) When a subdivision is to be served by a public water system, the complete supply system within the subdivision including fire hydrants, shall be installed at the expense of the applicant. The size and location of mains, gate valves, hydrants, and service connections shall be reviewed and approved in writing by the Portland Water District and the Windham Fire Chief.
    - (c) When a proposed subdivision is not within a distance required for connection to the public water system, water supply shall be from individual wells or a private community water system. The following standards shall apply to individual wells or private community water systems.

- (1) Individual wells shall be sited and constructed to prevent infiltration of surface water, and contamination from subsurface waste water disposal systems and other sources of potential contamination.
  - (i) Due to the increased chance of contamination from surface water, dug wells shall be prohibited on lots of smaller than one acre. On lots of one acre or smaller, the applicant shall prohibit dug wells by deed restrictions and a note on the plan.
  - (ii) On lots greater than one acre, dug wells may only be installed where it is not possible to utilize another well system.
  - (iii) Wells shall not be constructed within 100 feet of the traveled way of any street if located downhill from the street, or within 50 feet of the traveled way of any street if located uphill of the street. This restriction shall be included as a deed restriction to the effected lots.
- (2) Lot design shall permit placement of wells, subsurface waste water disposal areas, and reserve sites for subsurface waste water disposal areas in compliance with the Maine Subsurface Wastewater Disposal Rules and the Well Drillers and Pump Installers Rules.
- (3) If a central water supply system is provided by the applicant, the location and protection of the source, the design, construction and operation of the system shall conform to the standards of the Maine Rules Relating to Drinking Water (10-144A C.M.R. 231).
- (4) In residential subdivisions ~~where the Fire Department identifies the need for additional water storage capacity for fire fighting purposes~~located more than 1,000 linear feet from a fire hydrant served by the Portland Water District, the applicant shall provide adequate water storage facilities for firefighting purposes.
  - (i) Facilities may be ponds with dry hydrants, underground storage reservoirs or other methods acceptable to the Fire Chief.
  - (ii) A minimum storage capacity shall meet the requirements of the National Fire Protection Association Life Safety Code (NFPA 101). The Board may require additional storage capacity upon a recommendation from the Fire Chief.
  - (iii) Where surface ponds are proposed for water storage, the capacity of the pond shall be calculated based on the lowest water level less an equivalent of three feet of ice. An easement shall be granted to the municipality granting access to and maintenance of dry hydrants or reservoirs where necessary.
  - (iv) Hydrants or other provisions for drafting water shall be provided to the specifications of the fire department. Minimum pipe size connecting dry hydrants to ponds or storage vaults shall be six inches. A suitable accessway to the hydrant or other water source shall be constructed.

- (v) The Board may waive the requirement for water storage only upon submittal of evidence that the soil types in the subdivision will not permit their construction or installation and/or that the Fire Chief has indicated in writing that alternate methods of fire protection are available and incorporated into the subdivision plan.

C. Erosion and Sedimentation and Impact on Water Bodies

1. Where a subdivision is traversed by a watercourse, drainageway, or where the Board feels that surface water drainage to be created by the subdivision should be controlled for the protection of the subdivision and owners of property abutting it, there shall be provided an easement or drainage right-of-way and culverts, catch basins or other means of channeling surface water within such subdivision and over the property of owners abutting upon it, of such nature, width and location as the Board deems adequate.
  - (a) The applicant shall transfer the easement to a home owners association.
  - (b) Maintenance of the easement will be the responsibility of the home owners association.
  - (c) The easement shall specify that in the event that the applicant or home owners association neglects its maintenance responsibilities, the Town reserves the right to maintain the features of the easement, and charge the home owners association for all expenses.
2. The developer shall provide a statement from a Maine Licensed Professional Civil Engineer that the plan shall prevent soil erosion and sedimentation from entering waterbodies, wetlands and adjacent properties.
3. Topsoil shall be considered part of the subdivision. Except for surplus topsoil for roads, parking areas and building excavations, it is not to be removed from the site.
4. Except for normal thinning and landscaping, existing vegetation shall be left intact to prevent soil erosion. The Board may require a developer to take measures to correct and prevent soil erosion in the proposed subdivision.
5. The procedures outlined in the erosion and sedimentation control plan shall be implemented during the site preparation, construction, and clean-up stages. (*See Chapter 142 Surface Water Protection Ordinance*)

D. Sewage Disposal

1. **Public Sewer System.** Where an existing or proposed public sanitary gravity sewer main is located within one thousand five hundred (1,500) feet of a proposed