

NATIONAL FLOOD INSURANCE PROGRAM COMMUNITY FLOODPLAIN MANAGEMENT REGULATIONS REVIEW CHECKLIST

Community City of Winooski C.I.D. 500044# State Vermont

Review of: ART_FLOODPLAIN_DISTRICT_7.300_121509.doc

No other effective Winooski Zoning Regulations have been available for this review. James Trzepacz, ZA/City Planner) has informed me that the existing zoning regulations are not available digitally and that there is no contradictory language with regards to Variances, Waivers, or Exemptions. Revisions to the existing zoning are underway. Legally, this text (ART_FLOODPLAIN_DISTRICT_7.300_121509.doc) should have legal precedence and meet or exceed the standards of 44 CFR 60.3.

Reviewed by: Ned Swanberg, 802.241.4596 ned.swanberg@state.vt.us Date of Review: 12/16/09

Community Floodplain Management Regulations Reviewed by (circle one): FEMA (State) Other: (Agency Name)

Reviewer's Determination: The floodplain management regulations are compliant.

The floodplain management regulations are not compliant.

Approved by: _____ (FEMA only) Date of Approval: ___/___/___

The "Item Description" is a synopsis of the regulatory requirement and should not be construed as a complete description. Refer to the actual language contained in the National Flood Insurance Program Floodplain Management Regulations at Title 44 Code of Federal Regulations (CFR) Part 59 and 60 for the complete description of the required minimum criteria. Below the "Level of Regulations" column, you can indicate whether the community ordinance meets or exceeds the respective provision in the non-shaded areas.

Item Description <i>(Section reference to the NFIP Regulations follows)</i>	Level of Regs					Applicable Ordinance Section/Comments
	a	b	c	d ¹	e ¹	
ORDINANCES MUST CONTAIN THE FOLLOWING PROVISIONS:						
1. Citation of Statutory Authority				Y		I
2. Framework for administering the ordinance (including permit system, establishment of the office for administering the ordinance, record keeping, etc.).				Y		VI A Permit I Admin follows municipal procedure under 24 VSA 117 and municipal zoning. VIII C Records The actual effective text in Winooski has not been seen.
3. Adequate enforcement provisions (including a violation				Y		IX CO

¹ If a community has both floodways and coastal high hazard areas, it must meet the requirements of both level 60.3(d) and 60.3(e).

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and penalty section specifying actions the community will take to assure compliance). 24 VSA 4451- 4454						X Enforcement
4. Variance section with evaluation criteria and insurance notice. [60.6(a)]				Y		VI F Variances James Trzepacz, ZA, assures me that there are no current provisions for Variances.
5. Effective Date: _____ Adoption Date: _____				n/a		Draft of 12/15/09
6. Signature of Appropriate Official and Certification Official.				n/a		
OTHER PROVISIONS AND ACTIONS THAT MAY BE NECESSARY TO MAKE THE ORDINANCE LEGALLY ENFORCEABLE AND ENSURE THAT IT CAN BE PROPERLY ADMINISTERED:						
7: Purpose section citing health, safety, and welfare reasons for adoption.				Y		II B.
8: Disclaimer of Liability section advising that the degree of flood protection required by the ordinance is considered reasonable but does not imply total flood protection.				Y		III C
9. Abrogation and Greater Restriction section. (e.g., This Ordinance shall not in any way impair/remove the necessity of compliance with any other applicable laws, ordinances, regulations, etc. Where this Ordinance imposes a greater restriction, the provisions of this Ordinance shall control.)				Y		III A
10. Severability section. (e.g., If any section, provision, or portion of this ordinance is adjudged unconstitutional or invalid by a court, the remainder of the ordinance shall not be affected.)				Y		III B
11. Public hearing (State/local laws may require hearings)						
12. Publication (State/local laws may require public notices)						

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MINIMUM NFIP CRITERIA:						
13. Definitions: [59.1] <u>Y</u> Base Flood; <u>Y</u> Base Flood Elevation; <u>Y</u> Development; <u>N</u> Existing manufactured home park or subdivision; <u>N</u> Expansion to an existing manufactured home park or subdivision; <u>Y</u> Flood Insurance Rate Map; <u>Y</u> Flood Insurance Study; <u>Y</u> Floodway; <u>Y</u> Lowest Floor; <u>Y</u> Manufactured Home; <u>N</u> Manufactured Home Park or Subdivision; <u>Y</u> New Construction; <u>N</u> New Manufactured Home Park or Subdivision; <u>Y</u> Recreational Vehicle; <u>Y</u> Special Flood Hazard Area; <u>Y</u> Start of Construction; <u>Y</u> Structure; <u>Y</u> Substantial Damage; <u>Y</u> Substantial Improvement; <u>Y</u> Violation; Other Definitions as appropriate such as <u>Y</u> Floodproofing; <u>n/a</u> Highest adjacent grade for community's with mapped AO Zones; <u>Y</u> Historic Structures				Y		XI Definitions Text does not require definitions for Existing MHP, Expansion to MHP, Manuf HP or Subdiv, or New Manu HP
14. Adopt or reference correct Map and date. [60.3(b)] (If the community has an automatic adoption provision in its ordinance, is it a valid provision?)				Y		IV A 2 This text in the flood hazard area regulations should suffice legally and inform the official Winooski Zoning Map. It will be important to update the official Zoning Map with the effective DFIRM data to the extent appropriate by scale.
15. Adopt or reference correct Flood Insurance Study and date. [60.3(c), (d), and/or (e)] (If the community has an automatic adoption provision in its ordinance, is it a valid				Y		IV A

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	a	b	c	d ¹	e ¹	
provision?)						
16. Require permits for all proposed construction or other development including placement of manufactured homes to determine whether such construction or development is in a floodplain. [60.3(a)(1)]						
17. Require permits for all proposed construction and other development within SFHAs. [60.3(b)(1)]				Y		VI A James Trzepacz, ZA, assures me that there are no current provisions for Exemptions or Waivers.
18. Assure that all other State and Federal permits are obtained. [60.3(a)(2)]				Y		VIII A 1. b VI A
19. Review permits to assure sites are reasonably safe from flooding and require for new construction and substantial improvements in flood-prone areas [60.3(a)(3)]: (a) Anchoring (including manufactured homes) to prevent flotation, collapse, or lateral movement of the structure. [60.3(a)(3)(i)]				Y		VII A 1 a, b
(b) Use of flood-resistant materials. [60.3(a)(3)(ii)]				Y		VII A 1 c
(c) Construction methods and practices that minimize flood damage. [60.3(a)(3)(iii)]				Y		VII A 1 d
(d) Electrical, heating, ventilation, plumbing, air conditioning equipment, and other service facilities designed and/or located to prevent water entry to accumulation. [60.3(a)(3)(iv)]				Y		VII A 1 e
20. Review subdivision proposals and other development, including manufactured home parks or subdivisions, to determine whether such proposals will be reasonably safe from flooding [60.3(a)(4)]. If a subdivision or other				Y		VI C 1 new structures prohibited VII A 1 All devt VII A 14 dry land

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development proposal is in a flood-prone area, assure that: (a) Such proposals minimize flood damage. [60.3(a)(4)(i)]						access
(b) Public utilities and facilities are constructed so as to minimize flood damage. [60.3(a)(4)(ii)]				Y		VII A 1 e
(c) Adequate drainage is provided. [60.3(a)(4)(iii)]				Y		VII A 1 f
21. Require new and replacement water supply and sanitary sewage systems to be designed to minimize or eliminate infiltration. [60.3(a)(5) and 60.3(a)(6)]				Y		VII A 9, 10
22. Require onsite waste disposal systems be designed to avoid impairment or contamination. [60.3(a)(6)(ii)]				Y		VII A 11
23. Require base flood elevation data for subdivision proposals or other developments greater than 50 lots or 5 acres. [60.3(b)(3)]				Y		VIII A 1 for all devt IV B for all devt
24. In A Zones, in the absence of FEMA BFE data and floodway data, obtain, review, and reasonably utilize other BFE and floodway data as a basis for elevating residential structures to or above the base flood level, and for floodproofing or elevating non-residential structures to or above the base flood level. [60.3(b)(4)]				Y		IV B - use data, or determine BFE VI C 1 - no new structures VII A 3 SI in Zone A, AE at least one foot above BFE.
25. Where BFE data are utilized in Zone A, obtain and maintain records of the lowest floor and floodproofing elevations for new and substantially improved construction. [60.3(b)(5)]				Y		VIII C 2
26. In riverine areas, notify adjacent communities of watercourse alterations and relocations. [60.3(b)(6)]				Y		VIII B 2
27. Maintain the carrying capacity of an altered or relocated watercourse. [60.3(b)(7)]				Y		VII A 12

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28. Require all manufactured homes to be elevated and anchored to resist flotation, collapse, or lateral movement. [60.3(b)(8)]				Y		VI C 1 no new MH VII A 1 a, b all devt VII A 3 SI elevated at least one foot above BFE
29. Require all new and substantially improved <u>residential</u> structures within A1-30, AE, and AH Zones have their lowest floor (including basement) elevated to or above the Base Flood Elevation. [60.3(c)(2)]				Y		VI C 1 no new VII A 3 SI elevated to at least one foot above BFE
30. ² In AO Zones, require that new and substantially improved <u>residential</u> structures have their lowest floor (including basement) to or above the highest adjacent grade at least as high as the FIRM's depth number. [60.3(c)(7)]				Y		The City of Winooski does not have any mapped AO Zones. VI C 1 no new VII A 15 SI in AO
31. Require that new and substantially improved <u>non-residential</u> structures within A1-30, AE, and AH Zones have their lowest floor elevated or floodproofed to or above the Base Flood Elevation. [60.3(c)(3)]				Y		VI C 1 no new VII A 3 SI elevated VII A 4 b SI option for floodproofing to 2 feet above BFE
32. ² In AO Zones, require new and substantially improved <u>non-residential</u> structures have their lowest floor elevated or completely floodproofed above the highest adjacent grade to at least as high as the depth number on the FIRM. [60.3(c)(8)]				Y		The City of Winooski does not have any mapped AO Zones. VI C 1 new structures prohibited, VII A 15 AO
33. Require that for floodproofed non-residential structures, a registered professional engineer/architect certify that the				Y		VII A 4 b Certif. VIII C 3 Record

² Item 30 and 32 are not required if the community has no AO Zones.

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design and methods of construction meet requirements at 60.3(c)(3)(ii). [60.3(c)(4)]						
34. Require, for all new construction and substantial improvements, that fully enclosed areas below the lowest floor that are used solely for parking of vehicles, building access or storage in an area other than a basement and which is subject to flooding shall be designed to automatically equalize hydrostatic flood forces on exterior walls by allowing the entry and exit of floodwaters in accordance with the specifications in 60.3(c)(5). (Openings requirement)				Y		VII A 5 fully enclosed areas below grade prohibited VII A 6
35. ³ Until a regulatory floodway is designated, no encroachment may increase the Base Flood level more than 1 foot. [60.3(c)(10)]				Y		VII A 2 If the model is changed to allow for new structures, then VII A 2 should add Zone A to be careful.
36. ⁴ In Zones AO and AH, require drainage paths around structures on slopes to guide water away from structures. [60.3(c)(11)]				Y		The City of Winooski does not have any mapped AO or AH Zones. VII A 1 f
37. Require that manufactured homes placed or substantially improved within A1-30, AH, and AE Zones, which meet one of the following location criteria, to be elevated such that the lowest floor is to or above the Base Flood Elevation and be securely anchored: (i) outside a manufactured home park or subdivision; (ii) in a new manufactured home park or subdivision; (iii) in an expansion to an existing manufactured home park or subdivision;				Y		VI C 1 no new MH; VII A 3 SI MH must be at least one foot above BFE VII A 1 b anchored

³ Item 35 is not required if all streams have floodways designated.

⁴ Item 36 is not required if the community has no AO or AH Zones.

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iv) on a site in an existing park which a manufactured home has incurred substantial damage as a result of a flood. [60.3(c)(6)]						
38. In A-1-30, AH, and AE Zones, require that manufactured homes to be placed or substantially improved in an <u>existing</u> manufactured home park to be elevated so that (i) the lowest floor is at or above the Base Flood Elevation; OR (ii) the chassis is supported by reinforced piers no less than 36 inches in height above grade and securely anchored. [60.3(c)(12)]				Y		VI C 1 no new MH; VII A 3 SI MH at least one foot above BFE
39. In A1-30, AH, and AE Zones, all recreational vehicles to be placed on a site must (i) be elevated and anchored; OR (ii) be on the site for less than 180 consecutive days; OR (iii) be fully licensed and highway ready. [60.3(c)(14)]				Y		VII A 7, licensed
40. Designate a regulatory floodway which will not increase the Base Flood level more than 1 foot. [60.3(d)(2)]				Y		IV A, B adopt SFHA, BFE, FW XI Definition of "Floodway, Regulatory in .."
41. In a regulatory floodway, prohibit any encroachment, which would cause any increase in the Base Flood level unless hydrologic and hydraulic analyses prove that the proposed encroachment would not increase flood levels during the Base Flood discharge. [60.3(d)(3)]				Y		VII B
42. In V1-30, VE, and V Zones, obtain and maintain the elevation of the bottom of the lowest horizontal structural member of the lowest floor of all new and substantially improved structures. [60.3(e)(2)]						

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43. In V1-30, VE, and V Zones, require that all new construction and substantial improvements:						
(a) Are elevated and secured to anchored pilings or columns so that the bottom of the lowest horizontal structural member is at or above the Base Flood Elevation. [60.3(e)(4)]						
(b) A registered professional engineer/architect certify that the design and methods of construction meet elevation and anchoring requirements at 60.3(e)(4)(i) and (ii). [60.3(e)(4)]						
(c) Have the space below the lowest floor either free of obstruction or constructed with breakaway walls. Any enclosed space shall be used solely for parking, building access, or storage. [60.3(e)(5)]						
(d) All new construction is landward of mean high tide. [60.3(e)(3)]						
(e) Prohibit use of fill for structural support. [60.3(e)(6)]						
(f) Prohibit alteration of sand dunes and mangrove stands, which would increase potential flood damage. [60.3(e)(7)]						
44. Require that manufactured homes placed or substantially improved within V1-30, VE, and V Zones, which meet one of the following location criteria, meet the V Zone standards in 60.3(e)(2) through (e)(7):						
(i) outside a manufactured home park or subdivision;						
(ii) in a new manufactured home park or subdivision;						
(iii) in an expansion to an existing manufactured home park or subdivision;						
(iv) on a site in an existing park which a manufactured home has incurred substantial damage as a result of a flood. [60.3(e)(8)]						
45. In V1-30, VE, and V Zones, require that manufactured homes to be placed or substantially improved in an						

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<p><u>existing</u> manufactured home park to be elevated so that</p> <p>(i) the lowest floor is at or above the Base Flood Elevation; OR</p> <p>(ii) the chassis is supported by reinforced piers no less than 36 inches in height above grade and securely anchored. [60.3(e)(8)(iv)]</p>						
<p>46. In V1-30, VE, and V zones, all recreational vehicles to be placed on a site must</p> <p>(i) be elevated and anchored; OR</p> <p>(ii) be on the site for less than 180 consecutive days; OR</p> <p>(iii) be fully licensed and highway ready. [60.3(e)(9)]</p>						

Additional Information:

- N Stand-alone Ordinance?
- Y Automatic Adoption?
- Y Additional Regulatory Measures? If yes, specify:

VI C Prohibited:

1. New residential or non-residential structures (including the placement of manufactured homes);
2. Storage or junk yards;
3. New fill except as necessary to elevate structures above the base flood elevation;
5. Critical facilities are prohibited in all areas affected by mapped flood hazards; and,

VII A 3 Structures, including Manufactured Homes, to be substantially improved to be at least one foot above BFE.

VII A 4 b Substantially improved non-residential structures may be floodproofed to 2 ' above BFE.

VII A 5 Enclosed areas below grade on all sides prohibited.

IX Certificate of Occupancy

XI Substantial Improvement determined over three years or by common plan of development

State Requirement:

- Y ANR Referral Requirement [24 VSA §4424]? VIII B 1
- Y Town/City/Village changes completed?

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Comments:

The City of Winooski received a Flood Hazard Boundary map on 2/1/1974 and joined the National Flood Insurance Program 3/27/1974. The current Flood Insurance Rate Map dates from 2/4/1987. In July 2009 FEMA released a Preliminary Chittenden County Digital Flood Insurance Rate Map (DFIRM). The Preliminary DFIRM aligns pre-existing data to an orthophoto base map and updates the flood hazard data along the Winooski River to align with two foot contours derived from LiDAR data.

Please note that previous computer/digital versions of flood hazards in Winooski were created in-house by the Chittenden County Regional Planning Commission and did not capture all available data and are not the official/effective data. Such data is very helpful for general orientation.

At least four E-911 structures are currently shown in the Special Flood Hazard Area. There are probably more structures at least partially in the hazard zone.

DES	FREQUENCY
C1-COMMERCIAL	2
R2-MULTI FAMILY	1
U1-UTILITY	1
Total	4

As of 12/16/2009 there is only one flood insurance policy in effect in the City of Winooski. That policy covers \$1,000,000 in property or contents.

At this time it is important to review the Preliminary DFIRM and flood insurance study to be sure there are no questions about the data. FEMA will consider changes if needed through the end of the Appeal Period ending 1/27/2010. Please let me know if you see anything confusing.

The City of Burlington has commissioned hydrologic and hydraulic studies along the Winooski River and may submit changes to FEMA during the Appeal Period.

At this time, communities in Chittenden County that participate in the National Flood Insurance Program must review and update their flood hazard bylaws to adopt the new DFIRMs and confirm that they meet or exceed the standards in 44 CFR §60.3. VT DEC has encouraged all communities in Chittenden County to complete the update process by March 2010. This draft is ready for warning and adoption in Winooski.

If there are any further changes to the draft please let me know so I can review them. After adoption I will need a copy of the final text and a Clerk’s Certificate confirming legal adoption. When you get closer to that state let me know if you want an example of the certificate.

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Please let me know when you have dates set for the warnings and adoption.

If you have any questions please let me know.

Be well, Ned

Ned Swanberg
VT DEC Flood Plain Mapping Coordinator
103 South Main St., Building 10 N
Waterbury, VT 05671-0408
802.241.4596
ned.swanberg@state.vt.us
www.vtwaterquality.org