

Article 30 FLOOD DAMAGE PREVENTION

30.01 General Provisions

- 30.01.01 Lands to Which This Article Applies:** This Article shall apply to all Special Flood Hazard Areas within the Town's jurisdiction, including Extra-Territorial Jurisdictions (ETJs).
- A.** The use of any land or structure within the Special Flood Hazard Area shall comply with the use regulations in the UDO applicable to the underlying zoning district as well as any additional requirements imposed by this Article.
- 30.01.02 Basis for Establishing the Special Flood Hazard Areas:** The Special Flood Hazard Areas are those identified under the Cooperating Technical State (CTS) agreement between the State of North Carolina and FEMA in its Flood Insurance Study (FIS) and its accompanying Flood Insurance Rate Maps (FIRM), for Watauga County dated December 3, 2009 which are adopted by reference and declared to be a part of this Article.
- 30.01.03 Establishment of Floodplain Development Permit:** A Floodplain Development Permit shall be required in conformance with the provisions of this Article prior to the commencement of any development activities within Special Flood Hazard Areas determined in accordance with the provisions of Subsection 30.01.02 of this Article.
- 30.01.04 Compliance:** No structure or land shall hereafter be located, extended, converted, altered, or developed in any way without full compliance with the terms of this Article and other applicable regulations.
- 30.01.05 Abrogation and Greater Restrictions:** This Article is not intended to repeal, abrogate, or impair any existing easements, covenants, or deed restrictions. However, where this Article and another conflict or overlap, whichever imposes the more stringent restrictions shall prevail.
- 30.01.06 Interpretation:** In the interpretation and application of this Article, all provisions shall be:
- A.** Considered as minimum requirements; and
- B.** Liberally construed in favor of the governing body; and
- C.** Deemed neither to limit nor repeal any other powers granted under State statutes.
- 30.01.07 Warning and Disclaimer of Liability:** The degree of flood protection required by this Article is considered reasonable for regulatory purposes and is based on scientific and engineering consideration. Larger floods can and will occur. Actual flood heights may be increased by man-made or natural causes. This Article does not imply that land outside the Special Flood Hazard Areas or uses permitted within such areas will be free from flooding or flood damages. This Article shall not create liability on the part of the Town of Boone or by any officer or employee thereof for any flood damages that result from reliance on this Article or any administrative decision lawfully made hereunder.

30.02 Administration

30.02.01 Designation of Floodplain Administrator: See Subsection 2.06.04.

30.02.02 Floodplain Development Application, Permit and Certification Requirements

A. Application Requirements. Application for a Floodplain Development Permit shall be made to the Floodplain Administrator prior to any development activities located within Special Flood Hazard Areas. A special flood hazard area site plan shall be submitted in accordance with Appendix A.

B. Permit Requirements. The Floodplain Development Permit shall include, but not be limited to:

1. A description of the development to be permitted under the Floodplain Development Permit; and
2. The Special Flood Hazard Area determination for the proposed development in accordance with available data specified in Subsection 30.01.02 ; and
3. The Regulatory Flood Protection Elevation required for the reference level and all attendant utilities; and
4. The Regulatory Flood Protection Elevation required for the protection of all public utilities; and
5. All certification submittal requirements with timelines; and
6. A statement that no fill material or other development shall encroach into the floodway or non-encroachment area of any watercourse, as applicable; and
7. The flood openings requirements, if in Zones A, or AE; and
8. Limitations of below BFE enclosure uses (if applicable). (i.e., parking, building access and limited storage only).

C. Certification Requirements.

1. Elevation Certificates
 - a. An Elevation Certificate (FEMA Form 81-31) is required prior to the actual start of any new construction. It shall be the duty of the permit holder to submit to the Floodplain Administrator a certification of the elevation of the reference level, in relation to mean sea level. The Floodplain Administrator shall review the certificate data submitted. Deficiencies detected by such review shall be corrected by the permit holder prior to the beginning of construction. Failure to submit the certification or failure to make required corrections shall be cause to deny a Floodplain Development Permit.
 - b. An Elevation Certificate (FEMA Form 81-31) is required after the reference level is established. Within seven (7) calendar days of establishment of the

reference level elevation, it shall be the duty of the permit holder to submit to the Floodplain Administrator a certification of the elevation of the reference level, in relation to mean sea level. Any work done within the seven (7) day calendar period and prior to submission of the certification shall be at the permit holder's risk. The Floodplain Administrator shall review the certificate data submitted. Deficiencies detected by such review shall be corrected by the permit holder immediately and prior to further work being permitted to proceed. Failure to submit the certification or failure to make required corrections shall be cause to issue a stop-work order for the project.

- c. A final as-built Elevation Certificate (FEMA Form 81-31) is required after construction is completed and prior to Certificate of Compliance/Occupancy issuance. It shall be the duty of the permit holder to submit to the Floodplain Administrator a certification of final as-built construction of the elevation of the reference level and all attendant utilities. The Floodplain Administrator shall review the certificate data submitted. Deficiencies detected by such review shall be corrected by the permit holder immediately and prior to Certificate of Compliance/Occupancy issuance. In some instances, another certification may be required to certify corrected as-built construction. Failure to submit the certification or failure to make required corrections shall be cause to withhold the issuance of a Certificate of Compliance/Occupancy.

2. Floodproofing Certificate

If non-residential floodproofing is used to meet the Regulatory Flood Protection Elevation requirements, a Floodproofing Certificate (FEMA Form 81-65), with supporting data, an operational plan, and an inspection and maintenance plan are required prior to the actual start of any new construction. It shall be the duty of the permit holder to submit to the Floodplain Administrator a certification of the floodproof design elevation of the reference level and all attendant utilities, in relation to mean sea level. Floodproofing certification shall be prepared by or under the direct supervision of a professional engineer or architect and certified by same. The Floodplain Administrator shall review the certificate data, the operational plan, and the inspection and maintenance plan. Deficiencies detected by such review shall be corrected by the applicant prior to permit approval. Failure to submit the certification or failure to make required corrections shall be cause to deny a Floodplain Development Permit. Failure to construct in accordance with the certified design shall be cause to withhold the issuance of a Certificate of Compliance/Occupancy.

3. If a manufactured home is placed within Zone A, or AE, and the elevation of the chassis is more than thirty-six inches (36") in height above grade, an engineered foundation certification is required in accordance with the provisions of Subsection 30.03.02(D)(2).

4. If a watercourse is to be altered or relocated, a description of the extent of watercourse alteration or relocation; a professional engineer's certified report on the effects of the proposed project on the flood-carrying capacity of the watercourse and the effects to properties located both upstream and downstream; and a map showing the location of the proposed watercourse alteration or relocation shall all be submitted by the permit applicant prior to issuance of a Floodplain Development Permit.
5. Certification Exemptions. The following structures, if located within Zone A, or AE, are exempt from the elevation/floodproofing certification requirements specified in items (a) and (b) of this Subsection:
 - a. Recreational Vehicles meeting requirements of Subsection 30.03.02(G);
 - b. Temporary Structures meeting requirements of Subsection 30.03.02(H); and
 - c. Accessory Structures less than 150 square feet meeting requirements of Subsection 30.03.02(I).

30.02.03 Duties and Responsibilities of the Floodplain Administrator

- A. The Floodplain Administrator shall perform, but not be limited to, the following duties:
 1. Review all floodplain development applications and issue permits for all proposed development within Special Flood Hazard Areas to assure that the requirements of this Article have been satisfied; and
 2. Review all proposed development within Special Flood Hazard Areas to assure that all necessary Local, State and Federal permits have been received; and
 3. Notify adjacent communities and the North Carolina Department of Crime Control and Public Safety, Division of Emergency Management, State Coordinator for the National Flood Insurance Program prior to any alteration or relocation of a watercourse, and submit evidence of such notification to the Federal Emergency Management Agency (FEMA); and
 4. Assure that maintenance is provided within the altered or relocated portion of said watercourse so that the flood-carrying capacity is maintained; and
 5. Prevent encroachments into floodways and non-encroachment areas unless the certification and flood hazard reduction provisions of Subsection 30.03.05 are met; and
 6. Obtain actual elevation (in relation to mean sea level) of the reference level of the lowest floor (including basement) and all attendant utilities of all new and substantially improved structures, in accordance with the provisions of Subsection 30.02.02(B); and

7. Obtain actual elevation (in relation to mean sea level) to which all new and substantially improved structures and utilities have been floodproofed, in accordance with the provisions of Subsection 30.02.02(C); and
8. Obtain actual elevation (in relation to mean sea level) of all public utilities in accordance with the provisions of Subsection 30.02.02(C); and
9. When floodproofing is utilized for a particular structure, obtain certifications from a registered professional engineer or architect in accordance with the provisions of Subsection 30.02.02(C) and Subsection 30.03.02(C); and
10. Where interpretation is needed as to the exact location of boundaries of the Special Flood Hazard Areas, floodways, or non-encroachment areas (for example, where there appears to be a conflict between a mapped boundary and actual field conditions), make the necessary interpretation. The person contesting the location of the boundary shall be given a reasonable opportunity to appeal the interpretation as provided in Article 6; and
11. When Base Flood Elevation (BFE) data has not been provided in accordance with the provisions of Subsection 30.01.02, obtain, review, and reasonably utilize any BFE data, along with floodway data or non-encroachment area data available from a Federal, State, or other source, including data developed pursuant to Subsection 30.03.03(B), in order to administer the provisions of this Article; and
12. When Base Flood Elevation (BFE) data is provided but no floodway or non-encroachment area data has been provided in accordance with the provisions of Subsection 31.01.02, obtain, review, and reasonably utilize any floodway data or non-encroachment area data available from a Federal, State, or other source in order to administer the provisions of this Article; and
13. When the lowest floor and the lowest adjacent grade of a structure or the lowest ground elevation of a parcel in a Special Flood Hazard Area is above the Base Flood Elevation (BFE), advise the property owner of the option to apply for a Letter of Map Amendment (LOMA) from FEMA; and
14. Maintain a copy of the LOMA issued by FEMA in the Floodplain Development Permit file; and
15. Permanently maintain all records that pertain to the administration of this Article and make these records available for public inspection, recognizing that such information may be subject to the Privacy Act of 1974, as amended; and
16. Make on-site inspections of work in progress. As the work pursuant to a Floodplain Development Permit progresses, the Floodplain Administrator shall make as many inspections of the work as may be necessary to ensure that the work is being done according to the provisions of the local Ordinance and the terms of the permit. In exercising this power, the Floodplain Administrator has a

right, upon presentation of proper credentials, to enter on any premises within the jurisdiction of the community at any reasonable hour for the purposes of inspection or other enforcement action; and

17. Issue stop-work orders as required in accordance with the procedures of Section 12.08 of this Ordinance. Whenever a building or part thereof is being constructed, reconstructed, altered, or repaired in violation of this Article, the Floodplain Administrator may order the work to be immediately stopped. The stop-work order shall be in writing and directed to the person doing or in charge of the work. The stop-work order shall state the specific work to be stopped, the specific reason(s) for the stoppage, and the condition(s) under which the work may be resumed. Violation of a stop-work order constitutes a misdemeanor; and
18. Revoke Floodplain Development Permits as required in accordance with procedures of Section 12.09 of this Ordinance. The Floodplain Administrator may revoke and require the return of the Floodplain Development Permit by notifying the permit holder in writing stating the reason(s) for the revocation. Permits shall be revoked for any substantial departure from the approved application, plans, and specifications; for refusal or failure to comply with the requirements of State or local laws; or for false statements or misrepresentations made in securing the permit. Any Floodplain Development Permit mistakenly issued in violation of an applicable State or local law may also be revoked; and
19. Make periodic inspections throughout the Special Flood Hazard Areas within the jurisdiction of the community. The Floodplain Administrator and each member of his or her inspections department shall have a right, upon presentation of proper credentials, to enter on any premises within the planning jurisdiction of the Town at any reasonable hour for the purposes of inspection or other enforcement action; and
20. Follow through with corrective procedures of Subsection 3.02.04; and
21. Review, provide input, and make recommendations for reasonable conditions should a request for a variance be submitted; and
22. Maintain a current map repository to include, but not limited to, the FIS Report, FIRM and other official flood maps and studies adopted in accordance with the provisions of Subsection 30.01.02 of this Article, including any revisions thereto including Letters of Map Change, issued by FEMA. Notify State and FEMA of mapping needs; and
23. Coordinate revisions to FIS reports and FIRMs, including Letters of Map Revision Based on Fill (LOMR-Fs) and Letters of Map Revision (LOMRs).

30.02.04 Corrective Procedures: The Administrator shall follow the corrective procedures in accordance with Article 12 of this Ordinance.

30.02.05 Variance Procedures: The Board of Adjustment shall hear and decide requests for variances from the requirements of this Article. See Article 6.

30.03 Provisions for Flood Hazard Reduction

30.03.01 General Standards: In all Special Flood Hazard Areas the following provisions are required:

- A. All new construction and substantial improvements shall be designed (or modified) and adequately anchored to prevent flotation, collapse, and lateral movement of the structure.
- B. All new construction and substantial improvements shall be constructed with materials and utility equipment resistant to flood damage.
- C. All new construction and substantial improvements shall be constructed by methods and practices that minimize flood damage.
- D. Electrical, heating, ventilation, plumbing, air conditioning equipment, and other service facilities shall be designed and/or located so as to prevent water from entering or accumulating within the components during conditions of flooding to the Regulatory Flood Protection Elevation. These include, but are not limited to, HVAC equipment, water softener units, bath/kitchen fixtures, ductwork, electric/gas meter panels/boxes, utility/cable boxes, hot water heaters, and electric outlets/switches.
- E. All new and replacement water supply systems shall be designed to minimize or eliminate infiltration of floodwaters into the system.
- F. New and replacement sanitary sewage systems shall be designed to minimize or eliminate infiltration of floodwaters into the systems and to minimize discharges from the systems into flood waters.
- G. On-site waste disposal systems shall be located and constructed to avoid impairment to them or contamination from them during flooding. Any onsite sewage disposal system shall be located to avoid damage during flooding or interruption when evacuation is not necessary.
- H. Any alteration, repair, reconstruction, or improvements to a structure, which is in compliance with the provisions of this Article, shall meet the requirements of “new construction” as contained in this Article.
- I. Nothing in this Article shall prevent the repair, reconstruction, or replacement of a building or structure existing on the effective date of this Article and located totally or partially within the floodway, non-encroachment area, or stream setback, provided there is no additional encroachment below the Regulatory Flood Protection Elevation in the floodway, non-encroachment area, or stream setback, and provided that such repair, reconstruction, or replacement meets all of the other requirements of this Article.

- J. New solid waste disposal facilities and sites, hazardous waste management facilities, salvage yards, and chemical storage facilities shall not be permitted, except by variance as specified in Section 6.03. A structure or tank for chemical or fuel storage incidental to an allowed use or to the operation of a water treatment plant or wastewater treatment facility may be located in a Special Flood Hazard Area floodplain only if the structure or tank is either elevated or floodproofed to at least the Regulatory Flood Protection Elevation and certified in accordance with the provisions of Subsection 30.02.02(C)(2).
- K. All subdivision proposals and other development proposals shall be consistent with the need to minimize flood damage.
- L. All subdivision proposals shall on each lot intended for development, provide buildable area outside of the Floodway Zone and the Special Flood Hazard Area to greatest extent possible.
- M. All subdivision proposals and other development proposals shall have public utilities and facilities such as sewer, gas, electrical, and water systems located and constructed to minimize flood damage.
- N. All subdivision proposals and other development proposals shall have adequate drainage provided to reduce exposure to flood hazards.
- O. All subdivision proposals and other development proposals shall have received all necessary permits from those governmental agencies for which approval is required by Federal or State law, including Section 404 of the Federal Water Pollution Control Act Amendments of 1972, 33 U.S.C. 1334.
- P. When a structure is partially located in a Special Flood Hazard Area, the entire structure shall meet the requirements for new construction and substantial improvements.
- Q. When a structure is located in multiple flood hazard zones or in a flood hazard risk zone with multiple base flood elevations, the provisions for the more restrictive flood hazard risk zone and the highest Base Flood Elevation (BFE) shall apply.
- R. No artificial obstruction may be located within any Floodway zone.
- S. Any stream culverted on or before September 23, 1986, shall have a floodway of twenty feet (20') from the center of the culvert or to the limit of the mapped floodway as shown on the most recent FIRM, whichever is greater.

30.03.02 Specific Standards: In all Special Flood Hazard Areas where Base Flood Elevation (BFE) data has been provided, as set forth in Section 30.01.02, or Section 30.03.03, the following provisions, in addition to the provisions of Section, are required:

- A. Residential Construction. New residential construction and substantial improvement of any residential structure (including manufactured homes) shall have the reference

level, including basement, elevated no lower than the Regulatory Flood Protection Elevation.

- B. Non-Residential Construction.** New construction and substantial improvement of any commercial, industrial, or other non-residential structure shall have the reference level, including basement, elevated no lower than the Regulatory Flood Protection Elevation. Structures located in ZONE A, or AE Zones may be floodproofed to the Regulatory Flood Protection Elevation in lieu of elevation provided that all areas of the structure, together with attendant utility and sanitary facilities, below the Regulatory Flood Protection Elevation are watertight with walls substantially impermeable to the passage of water, using structural components having the capability of resisting hydrostatic and hydrodynamic loads and the effect of buoyancy.
- C.** A registered professional engineer or architect shall certify that the floodproofing standards of these Subsections are satisfied. Such certifications shall be provided to the Floodplain Administrator as set forth in Subsection 30.02.02(C), along with the operational plan and the inspection and maintenance plan.
- D. Manufactured Homes.**
 - 1. New and replacement manufactured homes shall be elevated so that the reference level of the manufactured home is no lower than the Regulatory Flood Protection Elevation.
 - 2. Manufactured homes shall be securely anchored to an adequately anchored foundation to resist flotation, collapse, and lateral movement, either by certified, engineered foundation system, or in accordance with the most current edition of the State of North Carolina Regulations for Manufactured Homes adopted by the Commissioner of Insurance pursuant to N.C. Gen. Stat. § 143-143.15. Additionally, when the elevation would be met by an elevation of the chassis thirty-six inches (36") or less above the grade at the site, the chassis shall be supported by reinforced piers or engineered foundation. When the elevation of the chassis is above thirty-six inches (36") in height, an engineering certification is required.
 - 3. All enclosures or skirting below the lowest floor shall meet the requirements of Subsection 30.03.02(E).
 - 4. An evacuation plan must be developed for evacuation of all residents of all new, substantially improved or substantially damaged manufactured home parks or subdivisions located within flood prone areas. This plan shall be filed with and approved by the Floodplain Administrator and the local Emergency Management Coordinator.
- E. Elevated Buildings.** Fully enclosed area, of new construction and substantially improved structures, which is below the lowest floor:

1. Shall not be designed or used for human habitation, but shall only be used for parking of vehicles, building access, or limited storage of maintenance equipment used in connection with the premises. Access to the enclosed area shall be the minimum necessary to allow for parking of vehicles (garage door) or limited storage of maintenance equipment (standard exterior door), or entry to the living area (stairway or elevator). The interior portion of such enclosed area shall not be finished or partitioned into separate rooms, except to enclose storage areas; and
2. Shall be constructed entirely of flood resistant materials; and
3. Zones A or AE shall include flood openings to automatically equalize hydrostatic flood forces on walls by allowing for the entry and exit of floodwaters. To meet this requirement, the openings must either be certified by a professional engineer or architect or meet or exceed the following minimum design criteria:
 - a. A minimum of two flood openings on different sides of each enclosed area subject to flooding;
 - b. The total net area of all flood openings must be at least one (1) square inch for each square foot of enclosed area subject to flooding;
 - c. If a building has more than one enclosed area, each enclosed area must have flood openings to allow floodwaters to automatically enter and exit;
 - d. The bottom of all required flood openings shall be no higher than one (1) foot above the adjacent grade;
 - e. Flood openings may be equipped with screens, louvers, or other coverings or devices, provided they permit the automatic flow of floodwaters in both directions; and
 - f. Enclosures made of flexible skirting are not considered enclosures for regulatory purposes, and, therefore, do not require flood openings. Masonry or wood underpinning, regardless of structural status, is considered an enclosure and requires flood openings as outlined above.

F. Additions/Improvements.

1. Additions and/or improvements to pre-FIRM structures when the addition and/or improvements in combination with any interior modifications to the existing structure are:
 - a. Not a substantial improvement, the addition and/or improvements must be designed to minimize flood damages and must not be any more non-conforming than the existing structure.
 - b. A substantial improvement, both the existing structure and the addition and/or improvements must comply with the standards for new construction.

2. Additions to post-FIRM structures with no modifications to the existing structure other than a standard door in the common wall shall require only the addition to comply with the standards for new construction.
 3. Additions and/or improvements to post-FIRM structures when the addition and/or improvements in combination with any interior modifications to the existing structure are:
 - a. Not a substantial improvement, the addition and/or improvements only must comply with the standards for new construction.
 - b. A substantial improvement, the existing structure and the addition and/or improvements must comply with the standards for new construction.
- G. Recreational Vehicles.**
1. A recreational vehicle may only be located within a Special Flood Hazard Area if the recreation vehicle is stored only for fewer than 180 consecutive days and is fully licensed and ready for highway use (a recreational vehicle is ready for highway use if it is on its wheels or jacking system, is attached to the site only by quick disconnect type utilities, and has no permanently attached additions);
 2. Permanently attached recreational vehicles are prohibited.
- H. Temporary Non-Residential Structures.** Prior to the issuance of a Floodplain Development Permit for a temporary structure, the applicant must submit to the Floodplain Administrator a plan for the removal of such structure(s) in the event of a hurricane, flash flood or other type of flood warning notification. The following information shall be submitted to the Floodplain Administrator for review:
1. The specified time period for which the temporary use will be used or required. Time specified may not exceed three (3) months, renewable up to one (1) year; and
 2. The name, address, and phone number of the individual responsible for the removal of the temporary structure; and
 3. The time frame prior to the event at which a structure will be removed (i.e., minimum of 72 hours before landfall of a hurricane or immediately upon flood warning notification); and
 4. A copy of the contract or other suitable instrument with the entity responsible for physical removal of the structure; and
 5. Designation, accompanied by documentation, of a location outside the Special Flood Hazard Area, to which the temporary structure will be moved.
- I. Accessory Structures.** When accessory structures (sheds, detached garages, etc.) are to be placed within a Special Flood Hazard Area, the following criteria shall be met:

1. Accessory structures shall not be used for human habitation (including working, sleeping, living, cooking or restroom areas); and
2. Accessory structures shall not be temperature-controlled; and
3. Accessory structures shall be designed to have low flood damage potential; and
4. Accessory structures shall be constructed and placed on the building site so as to offer the minimum resistance to the flow of floodwaters; and
5. Accessory structures shall be firmly anchored in accordance with the provisions of Subsection 30.03.01(A); and
6. All service facilities such as electrical shall be installed in accordance with the provisions of Subsection 30.03.01(D); and
7. Flood openings to facilitate automatic equalization of hydrostatic flood forces shall be provided below Regulatory Flood Protection Elevation in conformance with the provisions of Subsection 30.03.02(E)(3).
8. An accessory structure with a footprint less than 150 square feet that satisfies the criteria outlined above does not require an elevation or floodproofing certificate. Elevation or floodproofing certifications are required for all other accessory structures in accordance with Subsection 30.02.02(B).

J. Subdivisions

1. All subdivision proposals shall be designed to minimize flood damage.
2. All subdivision proposals shall have public utilities and facilities such as sewer, gas, electrical, and water systems located and constructed to minimize flood damage.
3. All subdivision proposals shall have adequate drainage provided to reduce exposure to flood hazards.
4. All subdivision proposals shall have received all necessary permits from those governmental agencies for which approval is required by Federal or State law, including Section 404 of the Federal Water Pollution Control Act Amendments of 1972, 33 U.S.C. 1334.
5. An applicant for a special use permit authorizing a major subdivision and an applicant for minor subdivision final plat approval shall be informed by the Administrator of the use and construction restrictions contained in this Article if any portion of the land to be subdivided lies within the Floodplain.
6. Final plat approval for any subdivision containing land that lies within a Special Flood Hazard Area may not be given unless the plat shows all Special Flood Hazard Area boundaries and contains in clearly discernible print the following statement:

“Use of land within the Special Flood Hazard Area is substantially restricted by the Flood Damage Prevention Ordinance of the Town of Boone.”

7. A Special Use Permit for a major subdivision and final plat approval for any subdivision may not be given if:
 - a. It reasonably appears that the subdivision is designed to create residential building lots; and
 - b. It reasonable appears that one more lots as described could not practicably be used as a residential building site because of the restrictions set forth in this Article.

K. Permissible Uses Within the Special Flood Hazard Area

The following uses shall be permitted within the Special Flood Hazard Area provided they are permitted under Article 16 of the UDO and documentation is submitted to show they shall comply with the provisions of this Section:

1. General farming, pasture, outdoor plant nurseries, horticulture, forestry, wildlife sanctuary, game farm, and other similar agricultural, wildlife and related uses.
2. Lawns, gardens, play areas, and other similar uses.
3. Golf courses, driving ranges, archery ranges, picnic grounds, parks, hiking, bicycle or horseback riding trails, open space and other similar private and public recreational uses.

30.03.03 Standards for Floodplains Without Established Base Flood Elevations: Within the Special Flood Hazard Areas designated as Approximate Zone A and established in Subsection 30.01.02, where no Base Flood Elevation (BFE) data has been provided by FEMA, the following provisions, in addition to the provisions of Section 30.03.01, shall apply:

- A.** No encroachments, including fill, new construction, substantial improvements or new development shall be permitted within a distance of twenty feet (20') each side from top of bank or five (5) times the width of the stream, whichever is greater, unless certification with supporting technical data by a registered professional engineer is provided demonstrating that such encroachments shall not result in any increase in flood levels during the occurrence of the base flood discharge.
- B.** The BFE used in determining the Regulatory Flood Protection Elevation shall be determined based on the following criteria:
 1. When Base Flood Elevation (BFE) data is available from other sources, all new construction and substantial improvements within such areas shall also comply with all applicable provisions of this Article and shall be elevated or floodproofed in accordance with standards in Subsections 30.03.01 and 30.03.02.
 2. When floodway or non-encroachment data is available from a Federal, State, or other source, all new construction and substantial improvements within floodway

and non-encroachment areas shall also comply with the requirements of Subsections 30.03.02 and 30.03.05.

3. All subdivision, manufactured home park and other development proposals shall provide Base Flood Elevation (BFE) data if development is greater than five (5) acres or has more than fifty (50) lots/manufactured home sites. Such Base Flood Elevation (BFE) data shall be adopted by reference in accordance with Subsection 30.01.02 and utilized in implementing this Article.
4. When Base Flood Elevation (BFE) data is not available from a Federal, State, or other source as outlined above, the reference level shall be elevated or floodproofed (nonresidential) to or above the Regulatory Flood Protection Elevation. All other applicable provisions of Subsection 30.03.02 shall also apply.

30.03.04 Standards for Riverine Floodplains with Base Flood Elevations but Without Established Floodways or Non-Encroachment Areas: Along rivers and streams where Base Flood Elevation (BFE) data is provided by FEMA or is available from another source but neither floodway nor non-encroachment areas are identified for a Special Flood Hazard Area on the FIRM or in the FIS report, the following requirements shall apply to all development within such areas:

- A. Standards of Subsections 30.03.01 and 30.03.02; and
- B. Until a regulatory floodway or non-encroachment area is designated, no encroachments, including fill, new construction, substantial improvements, or other development, shall be permitted unless certification with supporting technical data by a registered professional engineer is provided demonstrating that the cumulative effect of the proposed development, when combined with all other existing and anticipated development, will not increase the water surface elevation of the base flood more than one (1) foot at any point within the community.

30.03.05 Floodways and Non-Encroachment Areas: Areas designated as floodways or non-encroachment areas are located within the Special Flood Hazard Areas established in Subsection 30.01.02. The floodways and non-encroachment areas are extremely hazardous areas due to the velocity of floodwaters that have erosion potential and carry debris and potential projectiles. The following provisions, in addition to standards outlined in Subsections 30.03.01 and 30.03.02, shall apply to all development within such areas:

- A. No encroachments, including fill, new construction, substantial improvements and other developments shall be permitted unless:
 1. It is demonstrated that the proposed encroachment would not result in any increase in the flood levels during the occurrence of the base flood, based on hydrologic and hydraulic analyses performed in accordance with standard

engineering practice and presented to the Floodplain Administrator prior to issuance of Floodplain Development Permit, or

2. A Conditional Letter of Map Revision (CLOMR) has been approved by FEMA. A Letter of Map Revision (LOMR) must also be obtained upon completion of the proposed encroachment.
- B.** If Subsection 30.03.05(A) is satisfied, all development shall comply with all applicable flood hazard reduction provisions of this Article.
- C.** No manufactured homes shall be permitted, except replacement manufactured homes in an existing manufactured home park or subdivision, provided the following provisions are met:
1. The anchoring and the elevation standards of Subsection 30.03.02(D).