

**CHAPTER 18.53  
FLOOD HAZARD AREAS**

Sections:

- 18.53.010 Lands to Which This Ordinance Applies
- 18.53.020 Basis for Establishing the Areas of Special Flood Hazard
- 18.53.030 Definitions
- 18.53.040 Development Permit Required
- 18.53.050 Application for Development Permit
- 18.53.060 Administrator
- 18.53.070 Permit Review
- 18.53.080 Penalties for Non-Compliance
- 18.53.090 Abrogation and Greater Restrictions
- 18.53.100 Interpretation
- 18.53.110 Warning and Disclaimer of Liability
- 18.53.120 Use of Other Base Flood Data
- 18.53.130 Information to be Obtained and Maintained by Building Official
- 18.53.140 Alteration of Watercourses
- 18.53.150 Interpretation of FIRM Boundaries
- 18.53.160 Provisions for Flood Hazard Protection
- 18.53.170 Appeals
- 18.53.180 Variances

18.53.010 Lands to Which This Ordinance Applies: This ordinance shall apply to all areas of special flood hazard within the jurisdiction of the City of Moses Lake. (Ord. 2144, 12/9/03; Ord. 1012, 1981)

18.53.020 Basis for Establishing the Areas of Special Flood Hazard: The areas of special flood hazard identified by the Federal Insurance Administration in a scientific and engineering report entitled "The Flood Insurance Study for Grant County, Washington and Incorporated Areas" dated February 18, 2009 and any revisions thereto, with accompanying flood insurance rate maps (FIRM) and any revisions thereto, are hereby adopted by reference and declared to be a part of this ordinance. The Flood Insurance Study and the FIRM are on file at City of Moses Lake, 321 S. Balsam, Moses Lake, WA 98837. (Ord. 2436, 2/10/09; Ord. 2212, 7/12/05; Ord. 2144, 12/9/03; Ord 1348, 1988; Ord. 1012, 1981)

18.53.030 Definitions:

- A. Area of Shallow Flooding: Area of Shallow Flooding means a designated AO or AH Zone on the Flood Insurance Rate Map (FIRM). The base flood depths range from one foot (1') to three feet (3'); a clearly defined channel does not exist; the path of flooding is unpredictable and indeterminate; and velocity flow may be evident. AO is characterized as sheet flow and AH indicates ponding.
- B. Area of Special Flood Hazard: Area of Special Flood Hazard means the land in the flood plain within a community subject to a one percent (1%) or greater chance of flooding in any given year. Designation on maps always includes the letters A or V.
- C. Base Flood: Base Flood means the flood having a one percent (1%) chance of being equaled or exceeded in any given year. Also referred to as the "100-year flood." Designation on maps always includes the letters A or V.

- D. Basement: Basement means any area of the building having its floor sub-grade (below ground level) on all sides.
- E. Critical Facility: Critical Facility means a facility for which even a slight chance of flooding might be too great. Critical facilities include, but are not limited to, schools, nursing homes, hospitals, police, fire and emergency response installations, and installations which produce, use, or store hazardous materials or hazardous waste.
- F. Development: Development means any manmade change to improved or unimproved real estate, including but not limited to, buildings or other structures, mining, dredging, filling, grading, paving, excavating, or drilling operations or storage of equipment or materials located within the area of special flood hazard.
- G. Flood or Flooding: Flood or Flooding means a general and temporary condition of partial or complete inundation of normally dry land areas from the overflow of inland or tidal waters and/or the unusual and rapid accumulation of run-off of surface waters from any source.
- H. Flood Insurance Rate Map (FIRM): Flood Insurance Rate Map means the official map on which the Federal Insurance Administration has delineated both the areas of special flood hazards and the risk premium zones applicable to the community.
- I. Flood Insurance Study: Flood Insurance Study means the official report provided by the Federal Insurance Administration that includes flood profiles, the Flood Insurance Rate Maps, and the water surface elevation of the base flood.
- J. Floodway: Floodway means the channel of a river or other watercourse and the adjacent land areas that must be reserved in order to discharge the base flood without cumulatively increasing the water surface elevation more than one foot (1').
- K. Lowest Floor: Lowest Floor means the lowest floor of the lowest enclosed area (including basement). An unfinished or flood resistant enclosure, usable solely for parking of vehicles, building access or storage, in an area other than a basement area, is not considered a building's lowest floor, provided that such enclosure is not built so as to render the structure in violation of the applicable non-elevation design requirements of this ordinance found at Section 18.53.160 G. 2.
- L. Manufactured Home: Manufactured Home means a structure, transportable in one (1) or more sections, which is built on a permanent chassis and is designed for use with or without a permanent foundation when connected to the required utilities. For flood plain management purposes the term "manufactured home" also includes park trailers, travel trailers, and other similar vehicles placed on a site for greater than one hundred eighty (180) consecutive days. For insurance purposes the term "manufactured home" does not include park trailers, travel trailers, and other similar vehicles.
- M. Manufactured Home Park or Subdivision: Manufactured Home Park or Subdivision means a parcel (or contiguous parcels) of land divided into two (2) or more manufactured home lots for rent or sale.
- N. New Construction: New Construction means structures for which the "start of construction" commenced on or after the effective date of this ordinance.
- O. Recreation Vehicle: Recreational Vehicle means a vehicle 1) Built on a single chassis; 2) 400 square feet or less when measured at the largest horizontal projection; 3) Designed to be self-propelled or permanently towable by a light duty truck; and 4) Designed primarily

(6/09)

not for use as a permanent dwelling but as temporary quarters for recreation, camping, travel, or seasonal use.

- P. Start of Construction: Start of Construction includes substantial improvement, and means the date the building permit was issued, provided the actual start of construction, repair, reconstruction, placement, or other improvement was within one hundred eighty (180) days of the permit date. The actual start means either the first placement of permanent construction of a structure on a site, such as the pouring of slab or footings, the installation of piles, the construction of columns, or any work beyond the stage of excavation; or the placement of a manufactured home on a foundation. Permanent construction does not include land preparation, such as clearing, grading, and filling; nor does it include the installation of streets and/or walkways; nor does it include excavation for a basement, footings, piers, or foundation or the erection of temporary forms; nor does it include the installation on the property of accessory buildings, such as garages or sheds not occupied as dwelling units or not part of the main structure. For substantial improvements, the start of construction means the first alteration of any wall, ceiling, floor, or other structural part of the building, whether or not that alteration affects the external dimensions of the building.
- Q. Structure: Structure means a walled and roofed building including a gas or liquid storage tank that is principally above ground.
- R. Substantial Damage: Substantial Damage means damage of any origin sustained by a structure whereby the cost of restoring the structure to its before damaged condition would equal or exceed fifty percent (50%) of the market value of the structure before the damage occurred.
- S. Substantial Improvement: Substantial Improvement means any repair, reconstruction, or improvement of a structure, the cost of which equals or exceeds fifty percent (50%) of the market value of the structure either before the improvement or repair is started, or, if the structure has been damaged and is being restored, before the damage occurred. For the purpose of this definition, substantial improvement is considered to occur when the first alteration of any wall, ceiling, floor, or other structural part of the building commences, whether or not that alteration affects the external dimensions of the structure. The term does not, however, include either:
1. Any project for improvement of a structure to comply with existing state or local health, sanitary, or safety code specifications which have previously been identified by the local code enforcement official and which are solely necessary to assure safe living conditions, or
  2. Any alteration of a structure listed on the National Register of Historic Places or a State Inventory of Historic Places.
- T. Variance: Variance means a grant of relief from the requirements of this ordinance which permits construction in a manner that would otherwise be prohibited by this ordinance. (Ord. 2436, 2/10/09; Ord. 2212, 7/12/05; Ord. 2144, 12/9/03; Ord. 1348, 1988; Ord. 1012, 1981)

18.53.040 Development Permit Required: A development permit shall be obtained before construction or development begins within any area of special flood hazard established in this ordinance. The permit shall be for all structures including manufactured homes as set forth in the definitions and for all development including fill and other activities, also as set forth in the definitions. (Ord. 2144, 12/9/03; Ord. 1348, 1988; Ord. 1012, 1981)

18.53.050 Application for Development Permit: Application for a development permit shall be made on forms furnished by the Building Official and may include, but not be limited to; plans in duplicate drawn to scale showing the nature, location, dimensions, and elevations of the area in question; existing or proposed structures, fill, storage of materials, drainage facilities, and

(6/09)

the location of the foregoing. Specifically, the following information is required:

- A. Elevation in relation to mean sea level of the lowest floor (including basement) of all structures.
- B. Elevation in relation to mean sea level to which any structure has been flood proofed.
- C. Certification by a registered professional engineer or architect that the flood proofing methods for any non-residential structure meet the flood proofing criteria of this ordinance.
- D. A description of the extent to which any watercourse will be altered or relocated as a result of proposed development. (Ord. 2144, 12/9/03; Ord. 1348, 1988; Ord. 1012, 1981)

18.53.060 Administrator: The Building Official is hereby appointed to administer and implement this ordinance by granting or denying building or development permits in accordance with its provisions. (Ord. 2144, 12/9/03; Ord. 1012, 1981)

18.53.070 Permit Review: The Building Official shall review all development permits to determine:

- A. That the requirements of this ordinance have been satisfied.
- B. That all necessary permits have been obtained from those federal, state, or local governmental agencies from which prior approval is required.
- C. Assure that the encroachment provisions of this ordinance are met if the proposed development is located in the floodway. (Ord. 2144, 12/9/03; Ord. 1348, 1988; Ord. 1012, 1981)

18.53.080 Penalties for Non-Compliance: Any person, firm, or corporation who violates, disobeys, omits, neglects, or refuses to comply with or who resists the enforcement of any of the provisions of this ordinance shall be deemed to have violated the terms of this ordinance and will subject the offender to a civil penalty as provided in Chapter 1.08 of the Moses Lake Municipal Code. (Ord. 2144, 12/9/03; Ord. 1012, 1981)

18.53.090 Abrogation and Greater Restrictions: This ordinance is not intended to repeal, abrogate, or impair any existing easements, covenants, or deed restrictions. However, where this ordinance and another ordinance, easement, covenant, or deed restriction conflict or overlap, whichever imposes the more stringent restrictions shall prevail. (Ord. 2144, 12/9/03; Ord. 1012, 1981)

18.53.100 Interpretation: In the interpretation and application of this ordinance, all provisions shall be considered as minimum requirements, liberally construed in favor of the governing body, and deemed neither to limit nor repeal any other powers granted under state statutes. (Ord. 2144, 12/9/03; Ord. 1012, 1981)

18.53.110 Warning and Disclaimer of Liability: The degree of flood protection required by this ordinance is considered reasonable for regulatory purposes and is based on scientific and engineering considerations. Larger floods can and will occur on rare occasions. Flood heights may be increased by man-made or natural causes. This ordinance does not imply that land outside the areas of special flood hazards or uses permitted within such areas will be free from flooding or flood damages. This ordinance shall not create liability on the part of the City of Moses Lake, any officer or employee thereof or the Federal Insurance Administration, for any flood damages that result from reliance on this ordinance or any administrative decision lawfully made there under. (Ord. 2144, 12/9/03; Ord. 1012, 1981)

18.53.120 Use of Other Base Flood Data: When base flood elevation data has not been provided in accordance with this ordinance, establishing the areas of special flood hazard, the Building Official shall obtain, review, and reasonably utilize any base flood elevation and floodway data

(6/09)

available from a federal, state, or other source in order to administer the specific standards and floodway provisions of this ordinance. (Ord. 2144, 12/9/03; Ord. 1348, 1988; Ord. 1012, 1981)

18.53.130 Information to be Obtained and Maintained by Building Official:

- A. Where base flood elevation data is provided through the Flood Insurance Study, FIRM, or required as in this ordinance, obtain and record the actual (as built) elevation (in relation to mean sea level) of the lowest floor (including basement) of all new or substantially improved structures, and whether or not the structure contains a basement.
- B. For all new or substantially improved flood proofed, non-residential, structures where BFE data is provided through FIS, FIRM, or as required, verify and record the actual elevation (in relation to mean sea level) and maintain the floodproofing certifications required in this ordinance.
- C. Maintain for public inspection all records pertaining to provisions of this ordinance. (Ord. 2436, 2/10/09; Ord. 2144, 12/9/03; Ord. 1348, 1988; Ord. 1012, 1981)

18.53.140 Alteration of Watercourses:

- A. The Building Official shall notify adjacent communities and the Washington State Department of Ecology prior to any alteration or relocation of a watercourse, and submit evidence of such notification to the Federal Insurance Administration.
- B. The Building Official shall require that maintenance is provided within the altered or relocated portion of said water course so that flood carrying capacity is not diminished. (Ord. 2144, 12/9/03; Ord. 1348, 1988; Ord. 1012, 1981)

18.53.150 Interpretation of FIRM Boundaries: The Building Official shall make interpretations where needed, as to the exact location of the boundaries of the areas of special flood hazard (for example, where there appears to be a conflict between a mapped boundary and actual field conditions). (Ord. 2144, 12/9/03; Ord. 1012, 1981)

18.53.160 Provisions for Flood Hazard Protection: In all areas of special flood hazards the following standards are required:

- A. Anchoring: All new construction and substantial improvements shall be anchored to prevent flotation, collapse or lateral movement of the structure.
- B. All manufactured homes must likewise be anchored to prevent flotation, collapse, or lateral movement, and shall be installed using methods and practices that minimize flood damage. Anchoring methods may include, but are not limited to, use of over-the-top or frame ties to ground anchors (Reference FEMA's "Manufactured Home Installation in Flood Hazard Areas" guidebook for additional techniques).
- C. Construction Materials and Methods:
  - 1. All new construction and substantial improvements shall be constructed with materials and utility equipment resistant to flood damage.
  - 2. All new construction and substantial improvements shall be constructed using methods and practices that minimize flood damage.
  - 3. Electrical, heating, ventilation, plumbing, and air conditioning equipment and other service facilities shall be designed and/or otherwise elevated or located so as to prevent water from entering or accumulating within the components during conditions of flooding.

D. Utilities:

1. All new and replacement water supply systems shall be designed to minimize or eliminate infiltration of flood waters into the system.
2. New and replacement sanitary sewage system shall be designed to minimize or eliminate infiltration of flood waters into the systems and discharge from the systems into flood waters.
3. On-site waste disposal systems shall be located to avoid impairment to them or contamination from them during flooding.
4. Water wells shall be located on high ground that is not in the floodway.

E. Subdivision Proposals: All subdivision proposals shall be consistent with the need to minimize flood damage; shall have public utilities and facilities such as sewer, gas, electrical, and water systems located and constructed to minimize flood damage; shall have adequate drainage provided to reduce exposure to flood damage; and where base flood elevation data has not been provided or is not available from another authoritative source, it shall be generated for subdivision proposals and other proposed developments which contain at least fifty (50) lots or five (5) acres, whichever is less.

F. Review of Building Permits: Where elevation data is not available either through the Flood Insurance Study, FIRM, or from another authoritative source, applications for building permits shall be reviewed to assure that proposed construction will be reasonably safe from flooding. The test of reasonableness is a local judgment and includes use of historical data, high water marks, photographs of past flooding, etc. where available. Failure to elevate at least two feet (2') above grade in these zones may result in higher insurance rates.

G. Specific Standards: In all areas of special flood hazards where base flood elevation data has been provided as set forth in this ordinance, the following provisions are required:

1. Residential Construction: New construction and substantial improvement of any residential structure shall have the lowest floor, including basement, elevated one foot(1') or more above base flood elevation.
2. Fully enclosed areas below the lowest floor that are subject to flooding are prohibited, or shall be designed to automatically equalize hydrostatic flood forces on exterior walls by allowing for the entry and exit of floodwaters. Designs for meeting this requirement must either be certified by a registered professional engineer or architect or must meet or exceed the following minimum criteria:
  - a. A minimum of two (2) openings having a total net area of not less than one square inch (1") for every square foot of enclosed area subject to flooding shall be provided.
  - b. The bottom of all openings shall be no higher than one foot (1') above grade.
  - c. Openings may be equipped with screens, louvers, or other coverings or devices provided that they permit the automatic entry and exit of floodwaters.
3. Non-Residential Construction: New construction and substantial improvement of any commercial, industrial, or other non-residential structure shall either have the lowest floor, including basement, elevated one foot (1') or more above the level of the base flood elevation, or, together with attendant utility and sanitary facilities, shall

- a. Be floodproofed so that below one foot (1') above the base flood level the structure is water tight with walls substantially impermeable to the passage of water.
  - b. Have structural components capable of resisting hydrostatic and hydrodynamic loads and effects of buoyancy.
  - c. Be certified by a registered professional engineer or architect that the design and methods of construction are in accordance with accepted standards of practice for meeting provisions of this subsection based on their development and/or review of the structural design, specifications and plans. Such certifications shall be provided to the Building Official as set forth in this ordinance.
  - d. Non-residential structures that are elevated, not floodproofed, must meet the same standards for space below the lowest floor as described in this ordinance.
  - e. Applicants floodproofing non-residential buildings shall be notified that flood insurance premiums will be based on rates that are one foot (1') below the floodproofed level (e.g. a building constructed to one foot (1') above the base flood level will be rated at the base flood level).
4. **Critical Facility:** Construction of new critical facilities shall be, to the extent possible, located outside the limits of the Special Flood Hazard Area (SFHA) (100 year flood plain). Construction of new critical facilities shall be permissible within the SFHA if no feasible alternative site is available. Critical facilities constructed within the SFHA shall have the lowest floor elevated to three feet (3') or more above the level of the base flood elevation or five hundred (500) year flood, whichever is higher at the site. Floodproofing and sealing measures must be taken to ensure that toxic substances will not be displaced by or released into flood waters. Access routes elevated to or above the level of the base flood elevation shall be provided to all critical facilities to the extent possible.
5. **Manufactured Homes:** All manufactured homes to be placed or substantially improved within Zones A1-30, AH, and AE shall be elevated on a permanent foundation such that the lowest floor of the manufactured home is one foot (1') or more above the base flood elevation and be securely anchored to an adequately anchored foundation system in accordance with the provisions of this ordinance. This paragraph applies to manufactured homes to be placed or substantially improved in an expansion to an existing manufactured home park or subdivision. This paragraph does not apply to manufactured homes to be placed or substantially improved in an existing manufactured home park or subdivision except where the repair, reconstruction, or improvement of the streets, utilities, and pads equals or exceeds fifty percent (50%) of the value of the streets, utilities and pads before the repair, reconstruction, or improvement has commenced.
6. **Floodways:** Located within areas of special flood hazard established in this ordinance are areas designated as floodways. Since the floodway is an extremely hazardous area due to the velocity of flood waters which carry debris, potential projectiles, and erosion potential, the following provisions apply:
- a. Encroachments are prohibited, including fill, new construction, substantial improvements, and other development unless certification by a registered professional engineer is provided demonstrating through hydrologic and hydraulic analysis performed in accordance with standard engineering practice that encroachments shall not result in any increase in flood levels during the occurrence of the base flood discharge.

- b. Construction or reconstruction of residential structures is prohibited within designated floodways, except for (1) repairs, reconstruction, or improvements to a structure which do not increase the ground floor area; and (2) repairs, reconstruction, or improvements to a structure, the cost of which does not exceed fifty percent (50%) of the market value of the structure either, (a) before the repair or reconstruction is started, or (b) if the structure has been damaged, and is being restored, before the damage occurred. Work done on structures to comply with existing health, sanitary, or safety codes which have been identified by the local code enforcement official and which are the minimum necessary to assure safe living conditions, or to structures identified as historic places shall not be included in the fifty percent (50%).
  - c. If section 18.53.160 G 6a is satisfied, all new construction and substantial improvements shall comply with all applicable flood hazard reduction provisions of Section 18.53.160, Provisions for Flood Hazard Reduction.
7. Recreational Vehicles: Recreational vehicles placed on sites are required to either:
- a. Be on site for fewer than one hundred eighty (180) days; or
  - b. Be fully licensed and ready for highway use, on wheels or jacking system, attached to the site only by quick disconnect-type utilities and security devices, and have no permanently attached additions; or
  - c. Meet the requirements of Section 18.53.160 G. 5. above for the elevation and anchoring requirements for manufactured homes.
8. Wetlands Management: To the maximum extent possible, avoid the short and long term adverse impacts associated with the destruction or modification of wetlands, especially those activities which limit or disrupt the ability of the wetland to alleviate flooding impacts. The following process should be implemented:
- a. Review proposals for development within base flood plains for their possible impacts on wetlands located within the flood plain.
  - b. Ensure that development activities in or around wetlands do not negatively affect public safety, health, and welfare by disrupting the wetlands' ability to reduce flood and storm drainage.
  - c. Request technical assistance from the Department of Ecology in identifying wetland areas. Existing wetland map information from the National Wetlands Inventory (NWI) can be used in conjunction with the community's FIRM to prepare an overlay zone indicating critical wetland areas deserving special attention. (Ord. 2144, 12/9/03; Ord. 1348, 1988; Ord. 10121981)

18.53.170 Appeals: Any decision by any administrator, officer, board, or commission in carrying out the provisions of this chapter may be appealed as provided for in Chapter 20.11 of the Moses Lake Municipal Code or to the courts of the state as prescribed by law. (Ord. 2212, 7/12/05; Ord. 2144, 12/9/03; Ord. 1348, 1988)

18.53.180 Variances:

- A. The Hearing Examiner shall hear and decide requests for variances from the requirements of this chapter.
- B. In passing upon such applications, the Hearing Examiner shall consider all technical evaluations, all relevant factors, standards specified in other sections of this chapter, and:
  - 1. The danger that materials may be swept onto other lands to the injury of others.

2. The danger to life and property due to flooding or erosion damage.
  3. The susceptibility of the proposed facility and its contents to flood damage and the effect of such damage on the individual owner.
  4. The importance of the services provided by the proposed facility to the community.
  5. The necessity to the facility of a water front location, where applicable.
  6. The availability of alternative locations for the proposed use which are not subject to flooding or erosion damage.
  7. The compatibility of the proposed use with existing and anticipated development.
  8. The relationship of the proposed use to the comprehensive plan and flood plain management program for that area.
  9. The safety of access to the property in times of flood for ordinary and emergency vehicles.
  10. The expected heights, velocity, duration, rate of rise, and sediment transport of the flood waters and the effects of wave action, if applicable, expected at the site.
  11. The costs of providing governmental services during and after flood conditions, including maintenance and repair of public utilities and facilities such as sewer, gas, electrical, water systems, and streets and bridges.
- C. Upon consideration of the factors of the appropriate sections and the purposes of this ordinance, the Hearing Examiner may attach such conditions to the granting of variances as it deems necessary to further the purposes of this ordinance.
- D. The Community Development Director shall maintain the records of all appeal actions and report any variances to the Federal Insurance Administration upon request.
- E. Conditions for Variances:
1. Generally, the only condition under which a variance from the elevation standard may be issued is for new construction and substantial improvements to be erected on a lot of one-half (1/2) acre or less in size contiguous to and surrounded by lots with existing structures constructed below the base flood level, providing items one (1) through eleven (11) in subsection C have been fully considered. As the lot size increases, the technical justification required for issuing the variance increases.
  2. Variances may be issued for the reconstruction, rehabilitation, or restoration of structures listed on the National Register of Historic Places or the State Inventory of Historic Places, without regard to the procedures set forth in this section.
  3. Variances shall not be issued within a designated floodway if any increase in flood levels during the base flood discharge would result.
  4. Variances shall only be issued upon a determination that the variance is the minimum necessary, considering the flood hazard, to afford relief.
  5. Variances shall only be issued upon:

(8/05)

- a. A showing of good and sufficient cause.
  - b. A determination that failure to grant the variance would result in exceptional hardship to the applicant.
  - c. A determination that the granting of a variance will not result in increased flood heights, additional threats to public safety, extraordinary public expense, create nuisances, cause fraud on or victimization of the public as identified in subparagraph C, or conflict with existing local laws or ordinances.
6. Variances as interpreted in the National Flood Insurance Program are based on the general zoning law principle that they pertain to a physical piece of property; they are not personal in nature and do not pertain to the structure, or its inhabitants economic or financial circumstances. They primarily address small lots in densely populated residential neighborhoods. As such, variances from the flood elevations should be quite rare.
  7. Variances may be issued for non-residential buildings in very limited circumstances to allow a lesser degree of floodproofing than watertight or dry-floodproofing, where it can be determined that such action will have low damage potential, complies with all other variance criteria except subparagraph 1, and otherwise complies with the general standards.
  8. Any applicant to whom a variance is granted shall be given written notice that the structure will be permitted to be built with a lowest floor elevation below the base flood elevation and that the cost of flood insurance will be commensurate with the increased risk resulting from the reduced lowest floor elevation. (Ord. 2212, 7/12/05; Ord. 2144, 12/9/03; Ord. 1348, 1988; Ord. 1012, 1981)

## Flood Plain Map

(8/05)