

OKANOGAN COUNTY

Ordinance 2006 1

AN ORDINANCE ADOPTING REVISIONS TO THE EXISTING OKANOGAN COUNTY FLOODPLAIN MANAGEMENT ORDINANCE 97 2 REQUIRING THAT ALL FUTURE FLOODPLAIN DEVELOPMENT WITHIN OKANOGAN COUNTY ABIDE BY THE REGULATIONS AS IDENTIFIED IN THE EXISTING ORDINANCE INCLUDING AMENDMENTS MADE THERETO

WHEREAS the National Flood Insurance Act of 1968 created the National Flood Insurance Program (NFIP) and

WHEREAS the Flood Disaster Protection Act of 1973 made flood insurance mandatory and

WHEREAS the Washington State Department of Ecology is responsible for oversight of local floodplain management programs and compliance with Federal and State rules and guidelines relating floodplain management and

WHEREAS Okanogan County is part of the National Flood Insurance Program a Federal Government program enabling owners of property in the county to purchase flood insurance and this insurance is designed to provide an insurance alternative to disaster assistance to meet the escalating costs of repairing damage to structures and their contents in the event of a flood and

WHEREAS Okanogan County is required to adopt a Floodplain Management ordinance to be enrolled in the NFIP and that ordinance must be in compliance with all NFIP rules and regulations and

WHEREAS Okanogan County has adopted a Floodplain Management Ordinance Ordinance No 87 2 revised by Ordinance No 95 1 revised by Ordinance No 97 2 and again revised by Resolution No 125 2000 and

WHEREAS the Washington State Department of Ecology has reviewed Okanogan County's Floodplain Management Ordinance and concluded as written the Ordinance does not comply with NFIP standards and

WHEREAS the Washington State Department of Ecology has informed the County by letter dated October 5 2005 that the County's Floodplain Management Ordinance must be revised to comply with Federal and State insurance standards or risk being placed on probationary status with the NFIP and

WHEREAS a staff report was prepared by the Office of Planning and Development staff and reviewed and approved by the Board of Okanogan County Commissioners and

WHEREAS the purpose of this Ordinance is to correct a series of deficiencies which are inconsistent with Federal and State NFIP regulations and

WHEREAS it is not in the best interest of the County nor the residents of Okanogan County to be placed on probationary status and

NOW THEREFORE BE IT ORDAINED by the Board of County Commissioners that Okanogan County Code Chapter 15 08 Floodplain Management be amended for consistency with Federal and State NFIP regulations

BE IT FURTHER ORDAINED by the Board of County Commissioners that this specific language will be consistent with NFIP regulations and prevent probationary status with FEMA under the NFIP regulations and requirements

BE IT FURTHER ORDAINED by the Board of County Commissioners that the Floodplain Management Ordinance will be amended to read as follows

OKANOGAN COUNTY

FLOODPLAIN MANAGEMENT

ORDINANCE NUMBER 2006-1

APPROVED February 24, 1997

AMMENDED December 19, 2000

AMMENDED January 23, 2006

BOARD OF COUNTY COMMISSIONERS

OKANOGAN COUNTY, WASHINGTON

Chapter 15 08

FLOOD PLAIN MANAGEMENT

15 08 010 STATUTORY AUTHORIZATION

The State of Washington has authorized in RCW 86 12 county governments to adopt Comprehensive Flood Control Management Plans for any drainage basin that is located wholly or partially within the county Chapter 86 16 RCW requires counties to adopt Flood Plain Management Ordinances Furthermore the State of Washington has given in RCW 86 16 020 local governments the authority to exercise state wide flood plain management regulations through the administration of the National Flood Insurance Program by adoption of regulations designed to promote the public health safety and general welfare of its citizenry RCW 86 16 045 authorizes the County to adopt Flood Plain Management Ordinances or requirements that exceed the minimum federal requirements of the National Flood Insurance Program without following the procedures provided in RCW 86 16 031 (8)

15 08 020 PURPOSE AND INTENT

It is the purpose and intent of this ordinance to promote the public health safety and general welfare by ensuring that development activities in or around flood plains riverine flood areas and lacustrine flood areas do not negatively affect the lands ability to reduce flood and storm drainage and to minimize and eliminate public and private losses due to flood conditions in specific areas by provisions designed

- A To protect human life and health
- B To minimize expenditure of public money and costly flood control projects
- C To minimize the need for rescue and relief efforts associated with flooding and generally undertaken at the expense of the general public
- D To minimize prolonged business interruptions
- E To minimize damage to public facilities and utilities such as water and gas mains electric telephone and sewer lines streets and bridges located in areas of special flood hazard
- F To help maintain a stable tax base by providing for the sound use and development of areas of special flood hazard so as to minimize future flood blight areas
- G To provide a method to notify potential buyers that property is in an area of special flood hazard and
- H To ensure that those who occupy the areas of special flood hazard assume responsibility for their actions

15 08 030 METHODS OF REDUCING FLOOD LOSSES

To accomplish its purpose and intent this ordinance includes the following methods

and provisions for reducing flood losses

- A restricting or prohibiting uses which are dangerous to health safety and property due to water or erosion hazards or which result in damaging increases in erosion or in flood heights or velocities
- B requiring that uses vulnerable to floods including facilities which serve such uses be protected against flood damage at the time of initial construction
- C controlling the alteration of natural flood plains stream channels and natural protective barriers which help accommodate or channel flood waters
- D controlling filling grading dredging and other development in floodways which may increase flood damage and
- E preventing or regulating the construction of flood barriers in floodways which will unnaturally divert flood waters or may increase flood hazards in other areas

15 08 040 SOURCES AND DEFINITIONS OF TERMS

A Sources

- 1 Federal Emergency Management Agency Guide to Flood Insurance Rate Maps FIA 14 May 1988 or any additions or revisions which supersede such publication
- 2 Merriam Webster s Collegiate Dictionary 10th ed 1984
- 3 Okanogan County GMA Critical Areas Regulations Ordinance No 94 2 (adopted February 2 1994) and subsequent amendments thereto
- 4 Master Program for Okanogan County Shoreline Management adopted July 7 1987 and subsequent amendments thereto

B Definitions

Unless specifically defined below words or phrases used in this ordinance shall be interpreted so as to give them the meaning they have in common usage and to give this ordinance its most reasonable application

- 1 **Appeal** A request for review of the Administrator s interpretation of any provisions of this chapter
- 2 **Area Of Shallow Flooding** A designated AO or AH Zone on the Flood Insurance Rate Map (FIRM) The base flood depths range from one to three feet 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
- 3 **Area Of Special Flood Hazard** The land in the flood plain within a community subject to a one percent or greater chance of flooding in any given year Designation on maps always includes the letter A

(Not Bold)

- 4 **Basement** Any area of the building having its floor sub grade (below ground level) on all sides
- 5 **Base Flood** The flood having a one percent 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
- 6 **Base Flood Elevation (BFE)** The height of the base flood in relation to the National Geodetic Vertical Datum of 1929 (or other datum where specified)
- 7 **Critical Facility** A facility for which even the slight chance of flooding might be too great Critical facilities include but are not limited to churches schools day care centers prisons and detention facilities group care facilities sewage treatment facilities nursing homes hospitals police fire and emergency response installations installations which produce use or store hazardous materials or hazardous waste
- 8 **Day Care Center** Any licensed or non licensed child care facility that provides care during part of the twenty four hour day in a facility other than the family abode of the person or persons under whose direct care children are placed
- 9 **Detailed Study Areas** Those areas covered by the current Flood Insurance Study (FIS) for unincorporated areas of Okanogan County that have been studied by detailed methods including areas so identified in the FIS any area for which a Letter of Map Amendment (LOMA) or Letter of Map Revision (LOMR) has been issued and any areas studied in detail at the request of the Federal Emergency Management Agency (FEMA) since publication of the current FIS Detailed study entails the use of hydrologic and hydraulic study methods to determine flood hazard data
- 10 **Detention Facility** Any establishment dedicated to the incarceration of those members of a society deemed punishable for unlawful acts committed against property and or against any individual or group member of the general public
- 11 **Development** Any man made change to improved or unimproved real estate including but not limited to buildings or other structures mining dredging filling grading paving excavation or drilling operations or storage of equipment or materials located within the area of special flood hazard to include those associated areas relevant to flood management
- 12 **Effective FIRM** The latest FIRM issued by FEMA which is in effect as of the date shown in the title box of the FIRM as EFFECTIVE DATE REVISED or MAP REVISED
- 13 **Encroachment** The construction placement of fill or similar alteration of topography in the flood plain that reduces the area available to convey floodwaters
- 14 **FIRM** Flood Insurance Rate Map (see effective FIRM)
- 15 **Flood or Flooding** A general and temporary condition of partial or complete inundation of normally dry land areas from a) the overland flow of inland or tidal

waters and/or b) the unusual and rapid accumulation of runoff of surface waters from any source

- 16 **Flood Damage** Harmful inundation water erosion of soil stream banks and beds harmful deposition by water of eroded and shifting soils and debris upon property or in the beds of streams or other bodies of water damages by high water to public roads highways bridges utilities and to works built for protection against floods or inundation the interruption by floods of travel communication and commerce and all other high water influences and results which adversely affect the public health and safety of property (RCW 86 16 120)
- 17 **Flood Insurance Rate Map** The insurance and flood plain management map issued by FEMA that identifies based on detailed or approximate analysis areas of 100 year flood hazard in a community Also shown on the FIRM are actuarial insurance rate zones In areas studied by detailed analysis the FIRM also shows BFE s and 500 year flood plain boundaries
- 18 **Flood Insurance Study** The engineering study performed by FEMA to identify flood prone areas and other flood data within a community
- 19 **Flood Plain or Flood Prone Area** Any land area subject to inundation by water from any source (see definition of flooding)
- 20 **Flood Plain Management** The operation of a program of corrective and preventive measures for reducing flood damage including to but not limited to emergency preparedness plans flood control works and flood plain management regulations
- 21 **Flood Plain Management Regulations** Those zoning ordinances subdivision regulations building codes health regulations special purpose ordinances (such as a flood plain ordinance) and other applications of police power The term describes such state or local regulations in any combination thereof which provide standards for the purpose of flood damage prevention and reduction
- 22 **Floodway** 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
- 23 **Group Care Facility** An agency other than a foster family home which is maintained and operated for the care of a group of children on a twenty four hour basis
- 24 **Lacustrine Flood Hazard Area** Those areas subject to inundation by flooding from lakes or ponds
- 25 **Lowest Floor** 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 chapter

- 26 **Manufactured Home** A structure transportable in one 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. The term "manufactured home" does not include a recreational vehicle.
- 27 **Manufactured Home Park Or Subdivision** A parcel (or contiguous parcels) of land having two or more manufactured home sites for sale, rent, lease or transfer of ownership.
- 28 **Meander Belt** The area within which a stable river channel can be expected to move back and forth in the present climate. Instability resulting from land use changes or channel constraint can cause erosion beyond the meander belt. Riparian wetlands and related features such as oxbows and sloughs occur within the meander belt.
- 29 **New Construction** structures for which the start of construction commenced on or after the effective date of this ordinance.
- 30 **Non Detailed Study Areas** Those areas covered by the current Flood Insurance Study (FIS) for unincorporated areas of Okanogan County that have been studied by approximate methods. Study by approximate methods entails extrapolation of data computed for detailed study areas.
- 31 **Recreational Vehicle** A vehicle which is a) built on a single chassis, b) 400 square feet or less when measured at the largest horizontal projection, c) designed to be self propelled or permanently towable by a light duty truck, and d) designed primarily not for use as a permanent dwelling but as temporary living quarters for recreational camping, travel, or seasonal use.
- 32 **Regulatory Floodway** The channel of a stream plus any adjacent flood plain areas that must be kept free of encroachment so that the 100 year flood discharge can be conveyed without increasing the base flood elevation more than a specified amount.
- 33 **Riverine Flood Hazard Area** Those areas related to, formed by, or resembling a river (including tributaries), streams, creeks, etc., subject to inundation by flooding.
- 34 **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 180 days of the permit issuance date. The actual start means either the first placement of permanent construction of a structure on a site, such as the pouring of slabs or footings, the installation of piles, the construction of columns, or any work beyond the stage of excavation. 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.
- 35 **Structure** A walled and roofed building including a gas or liquid storage tank that is principally above ground.

- 36 **Substantial Improvement** Any repair reconstruction or improvement of a structure the cost of which equals or exceeds 50 percent of the market value of the structure either
- a) before the improvement or repair is started or
 - b) if the structure has been damaged and is being restored before the damage occurred For the purposes 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 include

- c) any alteration of a structure listed on the National Register of Historic Places or a State Inventory of Historic Places
 - d) any project for improvement and or of a structure to comply with existing state or local health sanitary or safety code specifications which are solely necessary to assure safe living
- 37 **Variance** A grant of relief from the requirements of this chapter which permits construction in a manner that would otherwise be prohibited by this chapter
- 38 **Water Surface Elevation** The height in relation to NGVD of 1929 (or other datum where specified) of floods of various magnitudes and frequencies in lacustrine (lake) and riverine flood hazard areas

15 08 050 GENERAL PROVISIONS

A LANDS TO WHICH THIS ORDINANCE APPLIES

This ordinance shall apply to all areas of special flood hazard within the jurisdiction of Okanogan County identified on Flood Insurance Rate Maps as 100 year flood plains and maps associated with other special flood studies

B BASIS FOR ESTABLISHING THE AREAS OF SPECIAL FLOOD HAZARD

The basis for establishing Local Flood Plain Management regulations shall be the areas designated as special flood hazard areas on the most recent maps provided by the Federal Emergency Management Agency for the National Flood Insurance Program Best available information shall be used if these maps are not available or sufficient (RCW 86 16 051)

The areas of special flood hazard identified by the Federal Insurance Administration in a scientific and engineering report entitled The Flood Insurance Study for the Okanogan County area (revised May 2 1994 and its subsequent revisions) with accompanying Flood Insurance Rate Maps is hereby adopted by reference and declared to be a part of this ordinance The Flood Insurance Study is on file at the Okanogan County Office of Planning and Development

C PENALTIES FOR NONCOMPLIANCE

No structure or land shall hereafter be constructed located extended converted or altered without full compliance with the terms of this ordinance and other applicable regulations

Violation of the provisions of this ordinance by failure to comply with any of its requirements including violations of conditions and safeguards established in connection with conditions shall constitute a gross misdemeanor. Any person who violates this ordinance or fails to comply with any of its requirements shall upon conviction thereof be fined not more than three hundred dollars (\$300 00) or imprisoned for not more than ninety (90) days or both for each violation and in addition shall pay all costs and expenses involved in the case. Nothing herein contained shall prevent Okanogan County from taking such other lawful action as is necessary to prevent or remedy any violation.

D 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.

E INTERPRETATION

In the interpretation and application of this ordinance, all provisions shall be

1. Considered as minimum requirements
2. Liberally construed in favor of the governing body, and
3. Deemed neither to limit nor repeal any other powers granted under State statutes.

F 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 area 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 Okanogan County, 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 hereunder.

15 08 060 ADMINISTRATION

A ESTABLISHMENT OF DEVELOPMENT PERMIT

1. Development Permit Required

A development permit shall be obtained before construction or development begins within any area of special flood hazard established in Section 15 08 050 B. The permit shall be for all structures including manufactured homes, as set forth in 15 08 040 B, DEFINITIONS, and for all development including fill and other activities, also as set forth in the DEFINITIONS.

2 Application for Development Permit

- a) Application for a development permit shall be made on forms furnished by the Okanogan County Office of Planning and Development and may include but not be limited to two (2) copies of plans 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 the location of the foregoing
- b) The following specific information is required on plan drawings
 - (1) elevation in relation to mean sea level of the lowest floor (including basement) of all structures
 - (2) elevation in relation to mean sea level to which any structure has been flood proofed
 - (3) certification by a registered professional engineer that the flood proofing methods for any nonresidential structure meet the flood proofing criteria in Section 15 08 070 B 2
 - (4) description of the extent to which a watercourse will be altered or relocated as a result of proposed development
 - (5) certified topographic data and
 - (6) hydrologic and hydraulic analyses (Applicable for non detailed study areas only)
- c) Information required by this ordinance for a detailed study area shall be provided by a professional licensed surveyor or a professional licensed engineer
- d) Information required by this ordinance for a non detailed study area shall be provided by a professional licensed engineer on a stable base mylar

B DESIGNATION OF THE ADMINISTRATOR

- 1 The Director of the Okanogan County Office of Planning and Development is hereby appointed to administer and implement this ordinance by granting or denying development permit applications in accordance with its provisions
- 2 The Director may at his/her discretion delegate the Administrative requirements of this ordinance

C DUTIES AND RESPONSIBILITIES OF THE ADMINISTRATOR

Duties of the Administrator shall include but not be limited to

- 1 **Permit Review**

- a) Review all development permits to determine that the permit requirements of this ordinance have been satisfied
- b) Review all development permits to determine that all necessary permits have been obtained from those Federal State or local governmental agencies from which prior approval is required
- c) Review all development permits to determine if the proposed development is located in the floodway If located in the floodway assure that the encroachment provisions of Section 15 08 070 are met

2 Use of Other Base Flood Data

When base flood elevation data has not been provided in accordance with Section 15 08 050 B BASIS FOR ESTABLISHING THE AREAS OF SPECIAL FLOOD HAZARD the Administrator shall obtain review and reasonably utilize any base flood elevation and floodway data available from a federal State or other source in order to administer Sections 15 08 070

3 Information to be Obtained and Maintained

- a) Where base flood elevation data is provided through the Flood Insurance Study or required as in Section 15 08 060 C 2 obtain and record the actual 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 structures
 - (1) verify and record the actual elevation (in relation to mean sea level) and
 - (2) maintain required flood proofing certifications
- c) Maintain for public inspection all records pertaining to the provisions of this ordinance

4 Alteration of Watercourses

- a) 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) Require that maintenance is provided within the altered or relocated portion of said watercourse so that the flood carrying capacity is not diminished

5 Interpretation of FIRM Boundaries

Make interpretations where needed as to exact location of the boundaries of the areas of special flood hazards (for example where there appears to be a conflict between a mapped boundary and actual field conditions) The person contesting the location of the boundary shall be given a reasonable opportunity to appeal the interpretation as provided in Section 15 08 060 D

D APPEAL AND VARIANCE PROCEDURES AND VARIANCE CONDITIONS

1 Procedures

- a) The Okanogan County Board of Adjustment/Hearings Examiner as established by Okanogan County Commissioners shall hear and decide appeals and

- requests for variances from the requirements of this ordinance
- b) The Okanogan County Board of Adjustment/Hearings Examiner shall hear and decide appeals when it is alleged there is an error in any requirement decision or determination made by the Administrator in the enforcement or administration of this ordinance
 - c) Those aggrieved by the decision of the Okanogan County Board of Adjustment/Hearings Examiner or any taxpayer may appeal such decision to Okanogan County Superior Court
 - d) In passing upon such applications the Okanogan County Board of Adjustment/Hearings Examiner shall consider all technical evaluations all relevant factors standards specified in other sections of this ordinance 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 waterfront 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 and
 - (11) the cost of providing governmental services during and after flood conditions including maintenance and repair of public utilities and facilities such as sewer gas electrical and water systems and streets and bridges
 - e) Upon consideration of the factors of Section 15 08 060 D 1 d) and the purposes of this ordinance the Okanogan County Board of Adjustment/Hearings Examiner may attach such conditions to the granting of variances as it deems necessary to further the purposes of this ordinance
 - f) The Administrator shall maintain the records of all appeal actions and report any variances to the Federal Insurance Administration upon request

2 Conditions for Variances

- a) 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 acre or less in size contiguous to and surrounded by lots with existing structures constructed below the base flood level providing items [(1) (11)] in Section 15 08 060 D 1 d) have been fully considered As the lot size increases the technical justification required for issuing the variance increases

- b) 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
- c) Variances shall not be issued within a designated floodway if any increase in flood levels during the base flood discharge would result
- d) Variances shall only be issued upon a determination that the variance is the minimum necessary considering the flood hazard to afford relief
- e) Variances shall only be issued upon
 - (1) a showing of good and sufficient cause
 - (2) a determination that failure to grant the variance would result in exceptional hardship to the applicant
 - (3) 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 Section 15 08 060 D 1 d) or conflict with existing local laws or ordinances
- f) 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 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
- g) Variances may be issued for nonresidential buildings in very limited circumstances to allow a lesser degree of flood proofing than watertight or dry flood proofing where it can be determined that such action will have low damage potential complies with all other variance criteria except 15 08 060 D 2 a) and otherwise complies with Sections 15 08 070 A 1 and 15 08 070 A 2 of the GENERAL STANDARDS
- h) 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

15 08 070 PROVISIONS FOR FLOOD HAZARD REDUCTION

A GENERAL STANDARDS

In all areas of special flood hazards the following standards are required

1 Anchoring

- a) All new construction and substantial improvements shall be anchored to prevent flotation collapse or lateral movement of the structure Substantial improvements shall include any raw sewage line or extension of any such line
- b) All manufactured homes must 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) See specific standards in Section 15 08 070 B 3

2 Construction Materials and Methods

- a) All new construction and substantial improvements shall be constructed with materials and utility equipment resistant to flood damage
- b) All new construction and substantial improvements shall be constructed using methods and practices that minimize flood damage
- c) 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

3 Utilities

- a) All new and replacement water supply systems shall be designed to eliminate infiltration of flood waters into the system
- b) New and replacement sanitary sewage systems shall be designed to eliminate infiltration of flood waters into the systems and discharge from the systems into flood waters
- c) On site waste disposal systems shall be located to avoid impairment to them or contamination from them during flooding

4 Subdivision Short Plat Binding Site Plan Planned Development Proposals

- a) All subdivision short plat binding site plan planned development proposals shall be consistent with the need to minimize flood damage
- b) All subdivision short plats binding site plan planned development proposals shall have public utilities and facilities such as sewer gas electrical and water systems located and constructed to minimize flood damage
- c) All subdivision short plat binding site plan planned development proposals shall have adequate drainage provided to reduce exposure to flood damage and
- d) Where base flood elevation data has not been provided or is not available from another authoritative source it shall be generated for subdivision short plat binding site plan planned development proposals and other proposed developments which contain at least 5 lots or 5 acres (whichever is less)

5 Review of Building Permits

a) Detailed Study Area

Information required by this ordinance for a detailed study area shall be provided by a professional licensed surveyor and or a professional licensed engineer

b) Non Detailed Study Area

Information required by this ordinance for a non detailed study area shall be provided by a professional licensed engineer. Computations of water surface elevations/base flood elevations in open channels may be documented utilizing the Quick 2 computer program (or its FEMA authorized revisions or replacement programs)

- (1) Where elevation data is not available either through the Flood Insurance Study or from another authoritative source (Section 15 08 060 C 2) 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 recent surveys photographs of past flooding etc where available. Failure to elevate at least two (2) feet above adjacent grade in these zones may result in higher insurance rates.

B SPECIFIC STANDARDS

In all areas of special flood hazards where base flood elevation data has been provided as set forth in Section 15 08 050 B BASIS FOR ESTABLISHING THE AREAS OF SPECIAL FLOOD HAZARD or Section 15 08 060 C 2 Use of Other Base Flood data the following provisions are required

1 Residential Construction

- a) New construction and substantial improvement of any residential structure shall have the lowest floor including basement elevated one foot or more above base flood elevation
- b) 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 flood waters. Designs for meeting this requirement shall be certified by a registered professional engineer and shall meet or exceed the following minimum criteria:
 - (1) A minimum of two openings having a total net area of not less than one square inch for every square foot of enclosed area subject to flooding shall be provided
 - (2) The bottom of all openings shall be no higher than one foot above grade
 - (3) Openings may be equipped with screens louvers or other coverings or devices provided that they permit the automatic entry and exit of floodwaters

2 Nonresidential Construction

New construction and substantial improvement of any commercial industrial or other nonresidential structure shall either have the lowest floor including basement elevated one foot or more above the level of the base flood elevation or together with attendant utility facilities shall

- a) be flood proofed so that below one foot above the base flood level the structure

- is watertight with walls substantially impermeable to the passage of water
- b) have structural components capable of resisting hydrostatic and hydrodynamic loads and effect of buoyancy
 - c) be certified by a registered professional engineer 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 official as set forth in Section 15 08 060 C 2
 - d) Nonresidential structures that are elevated not flood proofed must meet the same standards for space below the lowest floor as described in 15 08 070 B 1 b)
 - e) Applicants flood proofing nonresidential buildings shall be notified that flood insurance premiums will be based on rates that are one foot below the flood proofed level (e.g. a building constructed to the base flood level will be rated as one foot below that level)

3 Manufactured Homes

- a) All manufactured homes to be placed or substantially improved within Zones A1 30 AH and AE on the community's FIRM on sites
 - (1) Outside of a manufactured home park or subdivision
 - (2) In a new manufactured home park or subdivision
 - (3) In an expansion to an existing manufactured home park or subdivision or
 - (4) In an existing manufactured home park or subdivision on which a manufactured home has incurred substantial damage as the result of a flood

shall be elevated on a permanent foundation such that the lowest floor of the manufactured home is elevated one foot above the base flood elevation and be securely anchored to an adequately anchored foundation system to resist flotation collapse and lateral movement

- b) Manufactured homes to be placed or substantially improved on sites in an existing manufactured home park or subdivision within Zones A1 30 AH and AE on the community's FIRM that are not subject to the above manufactured home provisions shall be elevated so that either
 - (1) The lowest floor of the manufactured home is elevated one foot above the base flood elevation or
 - (2) The manufactured home chassis is supported by reinforced piers or other foundation elements of at least equivalent strength that are no less than 36 inches in height above grade and be securely anchored to an adequately anchored foundation system to resist flotation collapse and lateral movement

4 Recreational Vehicles

Recreational vehicles placed on sites within Zones A1 30 AH and AE on the

community s FIRM shall

- a) Be on the site for fewer than 180 calendar days during a calendar year and
- b) Be fully licensed and ready for highway use on its wheels or jacking system is attached to the site only by quick disconnect types utilities and security devices and has no permanently attached additions or
- c) Be elevated on a permanent foundation such that the lowest floor of the recreational vehicle is elevated one foot or more above the base flood elevation and be securely anchored to an adequately anchored foundation system to resist flotation collapse and lateral movement

5 Critical Facilities

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 or more above the level of the base elevation (100 year) at the site Flood proofing and sealing measures shall be taken to ensure that toxic substances will not be displaced by or released into flood waters Two access routes elevated to or above the level of the base flood plain shall be provided to all critical facilities Such elevated access routes shall not increase the base flood elevation by one foot or more

C FLOODWAYS

Located within areas of special flood hazard established in Section 15 08 050 B 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

- 1 Restriction of land uses within designated floodways include the prohibition of construction or reconstruction of residential structures except for
 - a) repairs reconstruction or improvements to a structure which do not increase the ground floor area and
 - b) repairs reconstruction or improvements to a structure of which the cost does not exceed fifty percent of the market value of the structure in either
 - (1) before the repair or reconstruction is started or
 - (2) if the structure has been damaged and is being restored before damage occurred

NOTE Work done on a structure to comply with existing health sanitary or safety codes or to structures identified as historic places may be excluded in the fifty percent determination only if agreed upon and approved by the Planning Director
- 2 The minimum requirements for national flood insurance program and
- 3 the state requirements adopted pursuant to RCW 86 16 031(8) that are applicable to the County
- 4 Encroachments including fill new construction substantial improvements and other development are prohibited unless certification by a 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 increase flood velocities or erosion potential on or off site or diminish the flood alleviation capacity of the river system

- 5 If Section 15 08 070 C is satisfied all new construction and substantial improvements shall comply with all applicable flood hazard reduction provisions of Section 15 08 070 PROVISIONS FOR FLOOD HAZARD REDUCTION

NOTE Where base flood elevations have been provided but floodways have not Section 15 08 070 D applies

D ENCROACHMENTS

The cumulative effect of any proposed development when combined with all other existing and anticipated development shall not increase the water surface elevation of the base flood more than one foot at any point as determined by a registered professional engineer

E STANDARDS FOR SHALLOW FLOODING AREAS (AO ZONES)

Shallow flooding areas appear on FIRM s as AO zones with depth designations The base flood depths in these zones range from 1 to 3 feet where a clearly defined channel does not exist or where the path of flooding is unpredictable and where velocity flow may be evident Such flooding is usually characterized as sheet flow In these areas the following provisions apply

- 1 New construction and substantial improvements of residential structures within AO zones shall have the lowest floor (including basement) elevated above the highest adjacent grade of the building site to or above the depth number specified on the FIRM (at least two feet if no depth number is specified)
- 2 New construction and substantial improvements of nonresidential structures within AO zones shall either
 - a) have the lowest floor (including basement) elevated above the highest adjacent grade of the building site to or above the depth number specified on the FIRM (at least two feet if no depth number is specified) or
 - b) together with attendant utility and sanitary facilities be completely flood proofed to one foot above that level so that any space below that level is watertight with walls substantially impermeable to the passage of water and with structural components having the capability of resisting hydrostatic and hydrodynamic loads and effects of buoyancy If this method is used compliance shall be certified by a registered professional engineer or architect as in section 15 08 070 B 2 c)
- 3 Require adequate drainage paths around structures on slopes to guide floodwaters around and away from proposed structures
- 4 Recreational vehicles placed on sites within AO Zones on the community s FIRM either
 - a) be on the site for fewer than 180 consecutive days and
 - b) be fully licensed and ready for highway use on its wheels or jacking system is

- attached to the site only by quick disconnect type utilities and security devices and has no permanently attached additions or
- c) Meet the requirements of 15 08 070 E above and the elevation and anchoring requirements for manufactured homes

15 08 080 EXEMPTIONS

Reserved

15 08 090 SEVERABILITY

If any section or provision of this ordinance shall be adjudged to be invalid or unconstitutional such adjudication shall not affect the validity of the ordinance as a whole or any section provision or part thereof not adjudged to be invalid or unconstitutional

15 08 100 REPEALER

Ordinance No 87 2 adopted May 8 1987 is hereby repealed

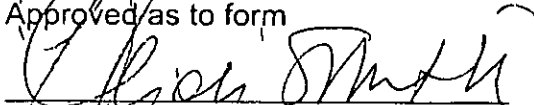
SECTION 3 EFFECTIVE DATE

This ordinance being found necessary to the health and welfare of the residents of Okanogan County shall take effect immediately upon its passage


Adopted by the undersigned Commissioners of Okanogan County in open session this


23rd day of January 2006

Approved as to form


Heidi Smith Civil Deputy Prosecutor

BOARD OF COMMISSIONERS


Don (Bud) Hover Chairman


Andrew Lampe Commissioner


Mary Lou Peterson Commissioner

