

BOARD OF COUNTY COMMISSIONERS
COUNTY OF KITTITAS
STATE OF WASHINGTON

ORDINANCE

NO. 93-18

AMENDING THE KITTITAS COUNTY CODE CHAPTER 14.08

KITTITAS COUNTY FLOOD DAMAGE PREVENTION ORDINANCE

An ordinance adopting an amended Floodplain Damage Prevention Code and repealing Ordinances 79-4 and 89-4 related to the development and new construction within defined and delineated floodplains within Kittitas County.

WHEREAS, RCW 36.32.120 delegates to the County the authority to adopt regulations to promote public health, safety and the general welfare; and,

WHEREAS,

1. The flood hazard areas of Kittitas County are subject to periodic inundation which results in loss of life and property, health and safety hazards, disruption of commerce and governmental services, extraordinary public expenditures for flood protection and relief.
2. Some flood losses are caused by the cumulative effect of obstructions in areas of special flood hazards which increase flood hazards which increase flood heights and velocities.
3. The Federal Emergency Management Agency notified Kittitas County on February 19, 1993 that specific changes were needed in the County's floodplain management program to maintain the County's National

Flood Insurance Program eligibility.

WHEREAS, The Board of Kittitas County Commissioners find the controls, standards and procedures set forth in this Ordinance to be essential to the protection of the public health, safety and general welfare of the citizens of Kittitas County; and the adoption thereof to be in the public interest;

NOW, THEREFORE, BE IT ORDAINED BY THE BOARD OF COUNTY COMMISSIONERS OF KITTITAS COUNTY, WASHINGTON:

SECTION 1.0 Purpose and Intent

1.1 Statement of Purpose

It is the purpose of this ordinance:

1. To protect human life and health;
2. To minimize expenditure of public money and costly flood control and flood relief projects;
3. To administer the State Floodplain Management Act (RCW 86.16) and maintain Kittitas County's National Flood Insurance Program eligibility.

SECTION 2.0 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.

- 2.1 "APPEAL" means a request for review of the County Floodplain Administrator's interpretation or application of any provision of this Ordinance or a request for a variance.
- 2.2 "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 to three feet; a clearly defined channel does not exist; the path of the flooding is unpredictable and indeterminate; and velocity flow may be evident.

- 2.3 "BASE FLOOD" means the flood having a one percent chance of being equaled or exceeded in any given year.
- 2.4 "BEST AVAILABLE INFORMATION" means in the absence of official flood insurance rate map data, communities can use data from other federal, state, or other sources provided this data has either been generated using technically defensible methods or is based on reasonable historical analysis and experience.
- 2.5 "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, installations which produce, use, or store hazardous materials or hazardous waste.
- 2.6 "DEVELOPMENT" means 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, located within the areas of a special flood hazard.
- 2.7 "FLOOD OR FLOODING" means a general and temporary condition of partial or complete inundation of normally dry land areas from: (1.) the overflow of inland or tidal waters and/or; (2.) the unusual and rapid accumulation of runoff or surface water from any source.
- 2.8 "FLOOD INSURANCE RATE MAP (FIRM)" 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.
- 2.9 "FLOOD INSURANCE STUDY" means the official report provided by the Federal Insurance Administration that includes flood profiles, the Flood Boundary-Floodway Map, and the water surface elevation of the base flood.
- 2.10 "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 (1) foot.

- 2.11 "HABITABLE FLOOR" means any floor usable for living purposes, which includes working, sleeping, eating, cooking or recreation, or a combination thereof. A floor used only for storage purposes is not a "habitable floor". Those floors located below the lowest floor and used only for storage purposes must comply with Section 5.2.1(2) for foundation opening requirements as set forth in this ordinance.
- 2.12 "HUNDRED YEAR FLOODPLAIN" means the land in the floodplain within a community subject to a one (1) percent or greater chance of flooding in any given year.
- 2.13 "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 as to render the structure in violation of the applicable non-elevation design requirements.
- 2.14 "NEW CONSTRUCTION" means structures for which the "start of construction" commenced on or after the effective date of this Ordinance.
- 2.15 "PERMANENT CONSTRUCTION" does not include land preparation, such as clearing, grading and filling; nor does it include 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.

2.16 "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. 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.

2.17 "STRUCTURE" means a walled and roofed building including a gas or liquid storage tank that is principally above ground.

2.18 "SUBSTANTIAL IMPROVEMENT" means 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:

1. Before the improvement or repair is started, or;
2. 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 other structural part of the building commences, whether or not that alteration affects the external dimensions of the structure.
3. The term does not include either any project for improvement of a structure to comply with existing state or local health, sanitary, or safety code specifications which are solely necessary to assure safe living conditions, or any alteration of a structure listed on the National Register of Historic Places or a State Inventory of Historic Places.

2.19 "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.

2.20 "WATER DEPENDENT" means a structure for commerce or industry which cannot exist in any other location and is dependent on the

water by reason of the intrinsic nature of its operations.

SECTION 3.0 General Provisions

3.1 Lands to Which This Ordinance Applies

This Ordinance shall apply to all lands within the one hundred (100) year floodplain within the jurisdiction of Kittitas County.

3.2 Basis for Establishing the Floodplain

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 County of Kittitas", dated November 5, 1980, with accompanying Flood Insurance Maps hereby adopted by reference and declared to be a part of this Ordinance. The Flood Insurance Study is on file at the County Planning Department.

3.3 Compliance

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.

3.4 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, deed restriction conflict or overlap, whichever imposes the more stringent restrictions shall prevail.

3.5 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;

3.6 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 manmade 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 Kittitas 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.

SECTION 4.0 Administration

4.1 Development Permit Required

A floodplain development permit shall be obtained before construction or development begins within any area of special flood hazard established in Section 3.2. 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 set forth in the "Definitions".

4.2 Designation of the Administrator

- 1.) The Planning Director is hereby appointed to administer and implement this Ordinance by granting or denying floodplain development permit applications in accordance with its provisions. The Planning Director shall also be responsible for interpretations of the Flood Insurance Rate Maps (FIRM), and floodplain and floodway field designations. The Kittitas County Planning Department shall maintain and keep all files and related information regarding the County's National Flood Insurance Program eligibility.
- 2.) The Director of the Building Department shall be responsible for field verification of first floor elevations at the time of framing inspection, and all other special construction requirements contained in this Ordinance. The Building Department shall also be responsible for ascertaining whether all building permits issued in areas within the 100 year floodplain comply with all of the special construction requirements of this Ordinance.
- 3.) Jointly, the Kittitas County Planning and Building Departments

shall: review all development permits to determine that the permit requirements of this Ordinance have been satisfied; review all development permits to determine that all necessary permits have been obtained from those Federal, State, or local government agencies from which prior approval is required;

- 4.) Review all development permits to determine if the proposed development is located in the floodway. If located in the floodway, assure that the provisions of Section 5.3 are met.

4.3 Application for Development Permit

Applications for a building or floodplain development permit shall be made on forms furnished by Kittitas County and may include, but not 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 the location of the following:

- 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 floodproofed;
- 3.) Certification by a registered professional engineer or architect that the floodproofing methods for any nonresidential structure meeting the floodproofing criteria contained in this Ordinance, and;
- 4.) Description of the extent to which any watercourse will be altered or relocated as a result of the proposed development.

4.4 Use of Other Base Flood Data

When base flood elevation data has not been provided in accordance with Section 3.2, BASIS FOR ESTABLISHING THE FLOODPLAIN, the Planning Director shall obtain, review, and reasonably utilize any base flood elevation data available from a federal, state or other source, in order to administer Section 5.2 SPECIFIC STANDARDS, and 5.3 FLOODWAYS.

4.5 Information to be Obtained and Maintained by the Planning Director:

- 1.) Obtain and record the actual (as built) elevation (in relation to mean sea level) of the lowest habitable floor (including basement) of all new or substantially improved structures, and whether or not the

structure contains a basement.

- 2.) For all new or substantially improved floodproofed structures:
 - (a) verify and record the actual elevation (in relation to mean sea level), and
 - (b) maintain the floodproofing certifications required in this Ordinance,
- 3.) Maintain for public inspection all records pertaining to the provisions of this Ordinance,
- 4.) Professional land surveyors, engineers and architects shall be authorized to prepare elevation certificates for compliance with this Ordinance and the National Flood Insurance Program.

4.6 Alteration of Watercourses: The Planning Director shall:

- 1.) Notify adjacent communities and the State Department of Ecology prior to any alteration of a watercourse, and submit evidence of such notification to the Federal Insurance Administration.
- 2.) Require that maintenance is provided within the altered or relocated portion of said watercourse so that the flood carrying capacity is not diminished.

4.7 Interpretation of FIRM Boundaries: The Planning Director shall:

Make interpretation where needed, as to the exact location of the boundaries of the 100 year floodplain (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 4.5.

4.8 Variance Procedure

4.8.1 Appeal Board

- 1.) The Kittitas County Building Appeals Board as established by the County shall hear and decide appeals and request for variances from the requirements of this Ordinance.
- 2.) The Appeals Board shall hear and decide appeals when it is alleged there is an error in any requirement, decision, or determination made by the County in the enforcement or administration of the Ordinance.

- 3.) Those aggrieved by the decision of the Appeals Board or any taxpayer, may appeal such decision to the Kittitas County Superior Court, as provided by law.
- 4.) In passing upon such application, the Appeals Board shall consider all technical evaluation, all relevant factors, standards specified in other section of this Ordinance, and the following:
 - a) The danger that materials may swept onto other lands to the injury of others;
 - b) the danger to life and property due to flooding or erosion damage;
 - c) the susceptibility of the proposed facility and its contents to flood damage and the effect of such damage on the individual owner;
 - d) the importance of the services provided by the proposed facility to the community;
 - e) the necessity to the facility of a waterfront location, where applicable;
 - f) the availability of alternative locations, for the proposed use which are not subject to flooding or erosion damage;
 - g) the compatibility of the proposed use with existing and anticipated development;
 - h) the relationship of the proposed use to the comprehensive plan and floodplain management program for the area;
 - l) the safety of access to the property in times of flood for ordinary and emergency vehicles;
 - j) the expected heights, velocity, duration, rate of rise, and sediment transport of the flood water and the effect of wave action, if applicable, expected at the site; and,
 - k) 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, and water systems, and streets and bridges.
- 5.) Generally, variances may be issued for new construction and substantial improvements to be erected on a lot one-half acre or less in size contiguous to and surrounded by lots with existing structures constructed below the base flood elevation, provided item (a through k) in the Section above have been fully considered. As the lot size increases beyond the one-half acre, the technical

- justification required for issuing the variance increases.
- 6.) Upon consideration of the factors of Section 4.8.1 and the purposes of this Ordinance, the Appeals Board may attach such conditions to the granting of a variance as it deems necessary to further the purposes of this Ordinance.
 - 7.) The Building Department shall maintain the records of all appeal actions and report any variances to the Federal Insurance Administration.
 - 8.) After the County has rendered an order either granting or denying a Flood Control Zone permit, said order may be appealed to the Pollution Control Hearings Board pursuant to State Law.

4.9 Conditions of Variances

- 1.) Variance 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 the remainder of this section.
- 2.) Variances shall not be issued within any designated floodway if any increase in flood levels during the base flood discharge would result. Variance requests in the designated floodway shall be accompanied by a professional engineering analysis of the resultant base flood discharge.
- 3.) Variances shall only be issued upon a determination that the variance is the minimum necessary, considering the flood hazard, to afford relief and upon:
 - a) a determination that failure to grant the variance would result in exceptional hardship to the applicant; and
 - b) a determination that the granting of a variance will not result in increased flood heights, additional threats to public safety, extraordinary public expense, and create a nuisance.
- 4.) Variances as interpreted in the National Flood Insurance Program are based on 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 elevation requirements should be quite rare.

- 5.) Variances may be issued for nonresidential buildings in very limited circumstances to allow a lesser degree of floodproofing than watertight or dry-proofing, where it can be determined that such action will have low damage potential, and comply with all other variance criteria.
- 6.) 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 lowest risk resulting from the reduced lowest floor elevation.

SECTION 5.0 Provisions for Flood Hazard Reduction

5.1 General Standards

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

5.1.1. Anchoring

- 1.) All new construction and substantial improvements shall be anchored to prevent flotation, collapse, or lateral movement of the structure.
- 2.) 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).

5.1.2 Construction Material 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.

5:1.3 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 systems shall be designed to minimize or eliminate infiltration of flood waters into the systems and discharge from the systems into flood waters; and,
- 3.) On-site waste disposal systems shall be located to avoid impairment to them or contamination from them during flooding.

5.1.4 Subdivision Proposals

- 1.) All subdivision proposals shall be consistent with the need 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 damage; and,
- 4.) 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.
- 5.) All subdivisions shall show on the face of both the preliminary and final plat, for either short or long plats, the boundary of the 100 year floodplain and floodway.

5.1.5 Review of Building Permits

Where elevation data is not available either through the Flood Insurance Study or from another authoritative source (Section 4.3.2) 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, photographs of past flooding, etc. Failure to elevate at least two (2) feet above grade in these zones may result in higher insurance rates.

5.2 Specific Standards

In all areas of special flood hazards where base flood elevation data has been provided as set forth in Section 3.2, BASIS FOR ESTABLISHING THE AREAS OF SPECIAL FLOOD HAZARD or Section Use of Other Base Flood Data the following provisions are required:

5.2.1 Residential Construction

- 1.) New construction and substantial improvement of any residential structure shall the lowest floor, including basement, elevated one foot or more above the 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 and hydrodynamic flood forces on exterior wall 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 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.
 - b.) The bottom of all openings shall be no higher than one foot 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.

5.2.2 Detached Accessory Buildings (Garages)

The following special provisions apply to detached accessory structures used as garages to single-family residences; When an accessory structure represents a minimal investment, the elevation or dry floodproofing standards need not be met. However all other requirements applicable to structures will be applicable. A minimum investment shall be determined by the applicable guiding authority, or by appeal under the variance procedure and shall be determined, if necessary, on a case to case basis. However, as a general application, an expenditure for the accessory structure of not more than ten percent (10%) of the value of the main

structure shall be considered a minimal investment.

1. Accessory structures shall not be used for human habitation and must be limited to parking and storage.
2. Accessory structures shall be designed to have a low flood damage potential.
3. Accessory structures shall be constructed and placed on the building site so as to offer the minimum resistance to the flow of floodwaters.
4. The accessory structure must be adequately anchored to prevent flotation, collapse, or lateral movement of the structure which may result in damage to other structures.
5. Service facilities such as electrical and heating equipment shall be elevated or floodproofed.
6. The accessory structure must comply with floodplain encroachment provisions of the County ordinance and the National Flood Insurance Program.

5.2.3 Nonresidential Construction

New construction and substantial improvement of any commercial, industrial or other nonresidential structures, except detached accessory structures, 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 and sanitary facilities, shall:

1. Be floodproofed so that below one foot above the base flood level the structure is watertight with walls substantially impermeable to the passage of water;
2. Have structural components capable of resisting hydrostatic and hydrodynamic loads and effects of buoyancy;
3. 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 certification shall be provided to the official as set forth in Section 4.4
4. Nonresidential structures that are elevated, not floodproofed, must meet the same standards for space below the lowest floor as described in this title.

5. Applicants floodproofing nonresidential buildings shall be notified that flood insurance premiums will be based on rates that are one foot below the floodproofed level.

5:2.4 Critical Facility

Construction of new critical facilities shall be, to the extent possible located outside the limits of the flood plain. Construction of new critical facilities shall be permissible. Critical facilities constructed within the base flood plain shall have the lowest floor elevated to three feet or more above the level of the base flood elevation at the site. Floodproofing and sealing measures must be taken to ensure that toxic substances will not be displaced by or release into flood waters. Access routes elevated to or above the level of the base flood plain shall be provided to all critical facilities to the extent possible.

5.2.5 Manufactured Homes

All Manufactured homes to be placed or substantially improved within Zones A1-30, AH, and AE on the ~~Community's~~ FIRM shall be elevated on a permanent foundation such that the lowest floor of the manufactures home is one foot or more above the Base Flood Elevation; and by securely anchored to an adequately anchored foundation system in accordance with the provisions of section 5.1.1(2). This paragraph applies to manufactures homes to be places or substantially improved in an expansion to an existing manufactures home park or subdivision. This paragraph does not apply to manufactures 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 pad equals or exceeds 50 percent of the value of the streets, utilities and pads before the repair, reconstruction or improvement has commenced.

5.3 Floodways

Located within areas of special flood hazard established in Section 3.2 are areas designed 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) Prohibit encroachments, including fill, new construction, substantial improvements, and other development unless

certification by a registered professional engineer or architect is provided demonstrating that encroachments shall not result in any increase in flood levels during the occurrence of the base flood discharge.

- 2) Construction or reconstruction of residential structures is prohibited within designated floodways, except for a) repairs, reconstruction, or improvements to structure which does not increase the ground floor area; and b) repairs, reconstruction or improvements to a structure, the cost of which does not exceed 50 percent of the market value of the structure either (A) before the repair, reconstruction, or repair 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 or to structures identified as historic places shall not be included in the 50 percent.
- 3) If Section 5.3 (1) is satisfied, all new construction and substantial improvements shall comply with all applicable flood hazard reduction provisions of Section 5.0, PROVISIONS FOR FLOOD HAZARD REDUCTION.
- 4) Filling in the floodway is prohibited except for residential maintenance. Residential maintenance is considered the importing of bark or top soil for flower beds and gardens. The quantity of material must be able to be hauled in a pick up truck and not require the use of a commercial dump truck. The total amount of material shall not exceed one (1) load, per calendar year.
- 5) Traditional agricultural practices are exempt.

5.4 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:

- 1) Review proposals for development within base flood plains for their possible impacts on wetlands located within the flood plain.
- 2) 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.

- 3) 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.

5.5 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 above ground 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 basements) elevated above the highest grade adjacent to the building, one foot or more 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, one foot or more 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 or 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 5.2.2(3).
- 3) Require adequate drainage paths around structures on slopes to guide floodwaters around and away from proposed structures.

BE IT ORDAINED that said amendment be, and hereby is, approved.

BE IT ORDAINED that said amendment be, and hereby is, approved.

ADOPTED this 7th day of December, 1993, at Ellensburg,
Washington.

BOARD OF COUNTY COMMISSIONERS
KITTITAS COUNTY, WASHINGTON



Ray Owens, Chairman

Mary Seubert, Commissioner



Don Sorenson, Commissioner

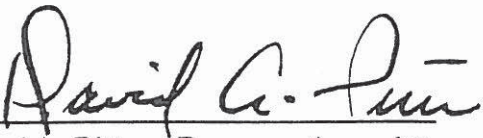
ATTEST:



Anita J. Kazee,
Clerk of the Board



APPROVED AS TO FORM: *as annotated by attached notes.*



David Pitts, Prosecuting Attorney

2.15 "Start of construction" - Is this not really
~~two~~ ^{two} definitions under a single rubric?
Would it be desirable to separate
"Permanent construction"

4.2 (2) typo: "whites" should be "whitens"

4.5 "Information to be obtained & maintained" -
by whom??

4.6 (1) who?

(2) " ?

4.7 who?