BEFORE THE BOARD OF COMMISSIONERS
OF THE COUNTY OF COOS, OREGON

IN THE MATTER OF AMENDING THE COOS )
COUNTY ZONING & LAND DEVELOPMENT ) FINAL DECISION AND
ORDINANCE AND COMPREHENSIVE PLAN ) ORDINANCE 14-02-001PL
FLOODPLAIN PROVISIONS )

This matter came before the Coos County Board of Commissioners sitting for the transaction of
business on the 13th of March 2014, concerning amendments to the Coos County Zoning and
Land Development Ordinance (CCZLDO) and Coos County Comprehensive Plan (CCCP).

WHEREAS, the Coos County Board of Commissioners initiated a legislative amendment to
consider amendments to the CCZLDO to amend the floodplain provisions of Article 4.6, and
Plan Policy 5.11.

WHEREAS, the proposed amendments were considered by the Planning Commission at public
hearing on March 6, 2014, and following deliberation, the Planning Commission recommended the
Board of Commissioners approve the proposal with some edits;

WHEREAS, Coos County Zoning and Land Development Ordinance Article 1.2 specifies the
process to approve a change in the text of said Ordinance.

WHEREAS, the Board considered the recommendation of approval from the Coos County
Planning Commission as well as testimony from interested parties; and,

WHEREAS, the Board has received the Planning Department staff report, Planning Commission
recommendation, testimony, evidence and all materials submitted at the public hearings on
March 13, 2014. The Board of Commissioners hereby adopts the proposed changes found in
Attachment A.

ADOPTED this 13th day of March 13, 2014.

BOARD OF COMMISSIONERS

[Signatures]

COMMISSIONER

[Signatures]

COMMISSIONER

[Signature]

ABSENT

COMMISSIONER

ATTEST:

[Signature]

Recording Secretary

APPROVED AS TO FORM:

[Signature]

Office of County Counsel

Ordinance 14-02-001PL

- 1 -
ARTICLE 4.6 OVERLAY ZONES

SECTION 4.6.100 PURPOSE: Overlay zones may be super-imposed over the primary zoning district and will either add further requirements or replace certain requirements of the underlying zoning district. The requirements of an overlay zone are fully described in the text of the overlay zone designations.

SECTION 4.6.200 FLOODPLAIN: It is the purpose of this section of the ordinance to promote the public health, safety, and general welfare, and to minimize public and private losses due to flood conditions in specific areas by provisions designated:

1. To protect human life and health;
2. To minimize expenditure of public money and costly flood control projects;
3. To minimize the need for rescue and relief efforts associated with flooding and generally undertaken at the expense of the general public;
4. To minimize prolonged business interruptions;
5. 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;
6. 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;
7. To ensure that potential buyers are notified that property is in an area of special flood hazard; and
8. To ensure that those who occupy the areas of special flood hazard assume responsibility for their actions.

SECTION 4.6.201 WARNING AND DISCLAIMER OF LIABILITY: The degree of flood protection from 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 Coos County, any officer or employee thereof for any flood damages that result from reliance on this ordinance or any administrative decision lawfully made thereunder.

SECTION 4.6.203 MANUFACTURED HOME AND MANUFACTURED HOME PARK OR SUBDIVISION WITHIN DESIGNATED FLOOD AREAS: The following definitions shall only apply to those provisions and requirements contained within Sections 4.6.200 to 4.6.290, inclusive:

“Manufactured Home” means 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. For floodplain management purposes the term “manufactured home” also includes park trailers, travel trailers, recreational vehicles, and other similar vehicles placed on site for greater than 180 consecutive days. For insurance purposes the term “manufactured home” does not include park trailers, travel trailers, recreational vehicles, and other similar vehicles.

“Manufactured Home Park or Subdivision” means a parcel (or contiguous parcels) of land divided into two or more manufactured home lots for rent or sale.

Attachment A
SECTION 4.6.205 INTERPRETATION: In the interpretation and application of the Flood Hazard Overlay (FP), all provisions shall be:
1. Considered as the minimum requirements; and
2. Deemed neither to limit nor to repeal any other powers granted under state statutes, including state building codes.

SECTION 4.6.207 DESIGNATION OF FLOOD AREAS:
1. The area of Coos County that is within a special flood hazard area identified by the Federal Insurance Administration in a scientific and engineering report entitled “The Flood Insurance Study for Coos County, Oregon and Incorporated Areas”, dated September 25, 2009 March 17, 2014, with accompanying Flood Insurance Map (FIRM) is hereby adopted by reference and declared to be part of this ordinance. The Flood Insurance Study and the FIRM are on file at the Coos County Planning Department.
2. Whenever sufficient data for a portion of a watercourse have been provided to permit the designation of a regulatory floodway, Coos County shall adopt boundaries for a regulatory floodway. The floodway shall be designed to carry the waters of a base flood without increasing water surface elevation at any point more than one foot above the established base flood elevation. The area of Coos County within an adopted regulatory floodway shall be subject to the additional requirements of this Ordinance for the prevention of flood damage.
3. When base flood elevation data has not been provided in accordance with #1 above, Coos County shall require a property development applicant to obtain base flood elevation data; Coos County shall use this “other” data to administer this Ordinance. This data may be obtained from a Federal, State or other source, including the U.S. Army Corps of Engineers, Soil Conservation Service, or Engineers. In the absence of an up-to-date engineering study, local newspapers, Regional Planning Groups and informed local witnesses can be a source of historical flooding data. The Planning Director, Planning Commission or Board of Commissioners will exercise local judgment based on historical data.
4. The base contour maps (Flood Insurance Rate Maps and Flood Boundary—Floodway maps) showing areas of special flood hazard are not detailed enough to reflect all site conditions. Where the map information clearly does not reflect actual site conditions, the Planning Director, Hearings Body or Board of Commissioners may interpret the exact location of the special Flood Hazard Boundary and Floodway Boundary. This determination is subject to appeal subject to Article 5.8.
5. In the case of #3 or #4 above the information shall be made public so that applicants may use that information to dispute floodplain rates or proceed with a letter of map revision or letter of map amendment through FEMA.

SECTION 4.6.209 PERMITTED USES: In a district in which the /FP zone is combined, those uses permitted by the underlying district are permitted outright in the /FP FLOATING ZONE Overlay Zone, subject to the provisions of this article.

SECTION 4.6.211 CONDITIONAL USES: In a district with which the /FP is combined, those uses subject to the provisions of Article 5.2 (Conditional Uses) may be permitted in the /FP FLOATING ZONE Overlay Zone, subject to the provisions of this article.

SECTION 4.6.213 IDENTIFICATION OF FLOOD HAZARD ON VERIFICATION LETTER: The verification letter pursuant to SECTION Section1.3.200 issued by the Coos County Planning Department shall identify whether the parcel of land for which a building permit is required is within any area of Special Flood Hazard established by Section 4.6.205.
SECTION 4.6.215 FLOOD ELEVATION DATA: For the purpose of determining applicable flood insurance risk premium rates Coos County shall:

1. Obtain, or require the applicant to furnish the following:
   a. The elevation (in relation to mean sea level) of the lowest habitable floor (including basement and below-grade crawl spaces) of all new or substantially improved structures, and whether or not such structures contain a basement. The Base Floodplain Elevation (BFE) determination must be based on information from the FIS study and the FEMA maps;
   b. If a structure is to be flood proofed, the elevation (in relation to mean sea level) to which the structure will be flood proofed shall be provided;

2. Maintaining flood proofing certifications for public inspections pertaining to provisions of the FP zone.

SECTION 4.6.217 PROCEDURAL REQUIREMENTS FOR DEVELOPMENT WITHIN SPECIAL FLOOD HAZARD AREAS: The following procedure and application requirements shall pertain to the following types of development:

1. Structures: Prior to issuance of a Zoning Compliance Letter (also refer to as a verification or clearance letter) pursuant to Section 3.1.200, a proposal for construction of a new structure or substantial improvement of an existing structure within a Special Flood Hazard Area shall be submitted with an “APPLICATION FOR DEVELOPMENT IN SPECIAL FLOOD HAZARD AREAS.”

As provided in this section, an applicant must submit with the development proposal an “Application for Development in Special Flood Hazard Areas.” This application must provide a plan drawn to scale showing the nature, location, dimensions, and elevations of the area in question; existing and proposed structures, fill, storage of materials, drainage facilities, and 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 of flood proofing in any structure;

c. Certification by a registered professional engineer or architect that the flood proofing methods for any non-residential structure meet the flood proofing criteria.

d. Description of the extent to which a watercourse will be altered or relocated as a result of proposed development. No relocation or substantial alteration of a watercourse shall be permitted unless a detailed hydraulic analysis, certified by a Registered Professional Engineer, is provided which demonstrates that:
   i. The flood carrying capacity for the altered or relocated portion of the watercourse will be maintained;
   ii. The area subject to inundation by the base flood discharge will not be increased; and
   iii. The alteration or relocation will cause no measurable increase in base flood levels.

If the county determines that the application complies with zoning ordinance (including the FP overlay zone), the county issues a “conditional zoning compliance letter” which enables the applicant to obtain building permits from the State Building Codes Agency.

Attachment A
Upon completion of construction, the applicant must submit a “post-construction elevation certification/flood proofing certificate” to the Coos County Planning Department. Upon verification of compliance with all requirements in the FP overlay zone, Coos County shall issue to the applicant a Flood Hazard Compliance Letter. The applicant shall present the flood hazard compliance letter to the State Building Codes Agency in order to obtain an occupancy permit or certificate of inspection.

2. Water Systems. Coos County recognizes the State Water Resources Department as the sole permit issuing agency pertaining to individual private wells supplying water to one or two residences except as may be established in new subdivisions or planned unit developments [see Section 4.6.260 (2)-(3)].

3. Sanitary Sewage Systems. Prior to a new installation, replacement or repair of an on-site septic system, the applicant shall request from the county a “Zoning Clearance Letter” (zoning verification). Coos County shall recognize the Department of Environmental Quality installation, replacement, and repair standards as sufficient to avoid impairment to the system or contamination from the system during flooding. Prior to new installation or replacement of an existing sanitary sewage system, the applicant shall request from the county a zoning clearance letter. Coos County shall recognize the Department of Environmental Quality installation and replacement standards as sufficient to minimize or eliminate infiltration of flood waters into the systems and discharge from the systems into the flood waters.

4. Other Development. “Other development” includes mining, dredging, filling, grading, paving, excavation or drilling operations located within the area of a special flood hazard, but does not include such uses as normal agricultural operations, fill less than 12 cubic yards, fences, road and driveway maintenance, landscaping, gardening and similar uses which are excluded from definition because it is the County’s determination that such uses are not of the type and magnitude to affect potential water surface elevations or increase the level of insurable damages.

Review and authorization of a floodplain application must be obtained from the Coos County Planning Department before “other development” may occur. Such authorization by the Planning Department shall not be issued unless it is established, based on a licensed engineer’s certification that the “other development” shall not:

a. Result in any increase in flood levels during the occurrence of the base flood discharge if the development will occur within a designated floodway; or,
b. Result in a cumulative increase of more than one foot during the occurrence of the base flood discharge if the development will occur within a designated flood plain outside of a designated floodway.

5. 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 floodplain). 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 three feet above BFE or to the height of the 500-year flood, whichever is higher. Access to and from the critical facility should also be protected to the height utilized above. Flood proofing and sealing measures must be taken to ensure that toxic substances will not be displaced by or released into

Attachment A
floodwaters. Access routes elevated to or above the level of the base flood elevation shall be provided to all critical facilities to the extent possible.

SECTION 4.6.219 SITES WITHIN SPECIAL FLOOD HAZARD AREAS:

1. If a proposed building site is in a special flood hazard area, all new construction and substantial improvements (including placement of prefabricated buildings and mobile homes), otherwise permitted by this Ordinance, shall:
   a. be designed (or modified) and adequately 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 “Manufactured Home Installation in Flood Hazard Areas” guidebook for additional techniques);
   b. be constructed with materials and utility equipment resistant to flood damage;
   c. be constructed by methods and practices that minimize flood damage; and
   d. 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.

2. All new construction and substantial improvements of residential structures shall have the lowest habitable floor (including basement and below-grade crawl spaces) elevated a minimum of one foot above the known base flood level. Fully enclosed areas below the lowest floor that are subject to flooding shall be 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 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 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.
   d. 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.
   e. Accessory structures to a residential structure (e.g., sheds, detached garages) do not represent significant investments and therefore may be treated differently in regard to the application of flood plain management measures outside a delineated floodway. In lieu of the elevation standard above, accessory structures may be permitted provided:
      i. Accessory structures shall not be used for human habitation.
      ii. Accessory structures shall be designed to have low flood damage potential.
      iii. Accessory structures shall be constructed and placed on the building site so as to offer the minimum resistance to the flow of floodwaters. Openings may be equipped with screens, louvers, or other covering or devices provided that they permit the automatic entry and exit of floodwaters.
      iv. Accessory structures shall be firmly anchored to prevent flotation which may result in damage to other structures.

Attachment A
v. Service facilities such as electrical and heating equipment shall be elevated above the base flood elevation or flood proofed.

Construction under the provisions of (i) through (v) above will result in increased flood insurance premium rates, which may be prohibitive.

3. All new construction and substantial improvements of any commercial, industrial or other non-residential structure shall either have the lowest floor, including basement, elevated one foot above the base flood elevation; or together with attendant utility and sanitary facilities, shall:
   a. Be floodproofed so that below 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 effects of buoyancy;
   c. Be certified by a registered professional engineer or architect that the standards of this subsection are satisfied;
   d. Meet the same standards for space below the lowest floor as described in Section 4.6.235(2) if the structure is elevated but not flood proofed; and
   e. 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.

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 (i.e. a building flood proofed to the base flood level will be rated as one foot below).

4. All new construction and substantial improvements of any agricultural structure shall either have the lowest floor, including basement, elevated one foot above the base flood elevation; meet the flood proofing requirements of (3) above; or together with attendant utility and sanitary facilities shall:
   a. Have a low potential for structural flood damage;
   b. Be designed and oriented to allow the free passage of floodwaters through the structure in a manner affording minimum flood damage;
   c. Ensure that all electrical and mechanical equipment subject to floodwater damage and permanently affixed to the structure be elevated above the base flood elevation; and
   d. Be certified by a registered professional engineer or architect that the standards of this subsection are satisfied.

Construction under the provisions of (a) through (d) above will result in increased flood insurance premium rates which may be prohibitive.

SECTION 4.6.221 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 above the base flood elevation and 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 “Manufactured Home Installation in Flood Hazard Areas” guidebook for additional techniques.

SECTION 4.6.223 RECREATIONAL VEHICLES: All recreational vehicles placed, within the A1-A30, AH, and AE zones shall be elevated on permanent foundation such that the lowest
floor of the recreational vehicle is one foot above the base flood elevation and installed using methods and practices that minimize flood damage. Anchoring methods may include, but are not limited to, use of over-the-top or frames ties to ground anchors.

SECTION 4.6.225 REVIEW OF LAND SUBDIVISION APPLICATIONS: Coos County shall be responsible for receiving applications and examining plans for land divisions. Coos County shall require certification by a registered civil engineer that land subdivision proposals shall be reasonably safe from flooding. If a subdivision proposal is in a special flood hazard area, the proposal and engineer’s certification shall be reviewed to assure that:

1. The proposal is consistent with the need to minimize flood damage and to ensure that building sites will be reasonably safe from flooding [44 CFR 60.3 (a)(3) and (4)]
2. Building lots shall have adequate buildable area outside of floodways.
3. All public utilities and facilities, such as sewer, gas, electrical and water systems are located and constructed to minimize or eliminate flood damage. And
4. Adequate drainage is provided to reduce exposure to flood hazards.
5. Where base flood elevation has not been provided or is not available from another alternative source, it shall be generated for subdivision proposals. Base flood elevation data shall be generated and/or provided for subdivision proposals and all other proposed development, including manufactured home parks and subdivisions greater than 50 lots or 5 acres, whichever is less [44 CFR 60.3 (a)(4) and (5)].
6. All on-site waste disposal systems shall be located and constructed to avoid functional impairment or contamination during flooding.

SECTION 4.6.227 EVALUATION OF VARIANCE APPLICATIONS:
1. In lieu of the findings required by Article 5.3, an application for a variance to the standards of this overlay zone may be approved only if the following findings are made:
   a. materials which may be swept onto other lands would not pose a threat of undue danger to others;
   b. the proposed development will not pose a danger to life or property due to flooding or erosion damage;
   c. failure to grant the variance would result in exceptional hardship to the applicant;
   d. granting the variance will not result in increased flood heights, additional threats to public safety, extraordinary public expense or create nuisances; and
   e. the variance is the minimum necessary to afford relief.
2. Variances shall not be issued within any designated floodway if any increase in flood levels during the base flood discharge would result.
3. A variance for historic preservation may be granted without consideration of the factors set forth above for the reconstruction, rehabilitation or restoration of a structure listed on the National Register of Historic Places or the State Inventory of Historic Places, or as otherwise identified in the Coos County Comprehensive Plan.
4. Variance applications are subject to notice and appeal pursuant to §5.0.900(B).

SECTION 4.6.229 FLOODWAYS: Located within special flood hazard areas established in Section 4.6.205 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. Encroachment, including fill, new construction, substantial improvements and other developments shall be prohibited, unless certification by a registered professional civil engineer is provided demonstrating through hydrologic and hydraulic analyses 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.
2. If (1) above is satisfied, all new construction and substantial improvements shall comply with all applicable flood hazard reduction provisions of this Article (Article 4.6).

3. Projects for stream habitat restoration may be permitted in the floodway provided:
   a. The project qualifies for a Department of the Army, Portland District Regional General Permit for Stream Habitat Restoration (NWP-2007-1023); and
   b. A qualified professional (a Registered Professional Engineer; or staff of NRCS; the county; or fisheries, natural resources, or water resources agencies) has provided a feasibility analysis and certification that the project was designed to keep any rise in 100-year flood levels as close to zero as practically possible given the goals of the project; and
   c. No structures would be impacted by any potential rise in flood elevation; and
   d. An agreement to monitor the project, correct problems, and ensure that flood carrying capacity remains unchanged is included as part of the local approval.

4. Manufactured dwellings may only be located in floodways only if according to one of the following conditions: if the manufactured dwelling already exists in the floodway, the placement was permitted at the time of the original installation, and the continued use is not a threat to life, health, property, or the general welfare of the public. 

5. **Manufactured dwellings are not permitted in the floodway**, $V_2$ or $VE_3$ zones as of the date this ordinance is adopted. Even if there was some other type of dwelling permitted in the past it may only be replaced with a stick-built (conventional) dwelling only if the dwelling meets the following criteria:
   a. The replacement dwelling will not be a threat to life, health, property, or general welfare of the public. As required, it must be demonstrated through hydrologic and hydraulic analysis performed in accordance with standard engineering practices that the manufactured dwelling and any accessory buildings, accessory structures, or any property improvements (encroachments) will not result in any increase in flood levels during the occurrence of the base flood discharge.
   b. The replacement dwelling and any accessory building or structures (encroachments) shall have the finished floor elevated to a minimum of 18 inches (46 cm) above the BFE as defined on the FIRM.
   c. The replacement dwelling must be placed and secured to a foundation support system designed by an Oregon professional engineer or architect and approved by the authority having jurisdiction (Oregon State Building Codes Division or other authority).
   d. The new dwelling and any accessory buildings or structures must not displace water to the degree that it causes a rise in the water level or diverts water in a manner that causes erosion or damage to other properties.
   e. The location of the replacement dwelling must be allowed by the Planning Department's LDO.
   f. Any other requirement deemed necessary by any authority having jurisdiction.

A new manufactured dwelling has replaced an existing manufactured dwelling whose original placement was permitted at the time of installation and the replacement home will not be a threat to life, health, property, or the general welfare of the public and it meets the following criteria:

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1 The Floodway is the channel of a stream plus any adjacent floodplain areas that must be kept free of encroachment so that the 1% annual chance flood can be carried without substantial increase in flood heights.
2 Coastal flood zone with velocity hazard (wave action); no Base Flood Elevations determined.
3 Coastal flood zone with velocity hazard (wave action); Base Flood Elevation determined

**Attachment A**
1. As required, it must be demonstrated through hydrologic and hydraulic analysis performed in accordance with standard engineering practices that the manufactured dwelling and any accessory buildings, accessory structures, or any property improvements (enroachments) will not result in any increase in flood levels during the occurrence of the base flood discharge.

2. The replacement of the manufactured dwelling and any accessory buildings or accessory structures (enroachments) shall have the finished floor elevated a minimum of 18 inches (46cm) above the BFE as defined on the Flood Insurance Rate Map.

3. The replacement manufactured dwelling is placed and secured to a foundation support system designed by an Oregon professional engineer or architect and approved by the authority having jurisdiction.

4. The replacement manufactured dwelling, its foundation supports, and any accessory buildings, accessory structures, or property improvements (enroachments) do not displace water to the degree that it causes a rise in the water level or diverts water in a manner that causes erosion or damage to other properties.

5. The location of a replacement manufactured dwelling is allowed by the local planning department's ordinance; and

6. Any other requirements deemed necessary by the authority having jurisdiction.

SECTION 4.6.231 ALTERATION OF WATER COURSES: If a development application proposes a stream, creek or other body relocation or alteration, Coos County shall:

1. Notify affected cities and the State Coordinating Agency (Department of Land Conservation and Development – DLCD) and other appropriate state and federal agencies prior to any alteration or relocation of a water course, and shall submit evidence of such notification to the Federal Insurance Administration at the following address (or if the office moves, at any subsequent address):
   Federal Insurance Administration
   500 C Street SW
   Washington, DC 20472

2. Require that maintenance is provided within the altered or relocated portion of said water course so that the flood carrying capacity is not diminished.

SECTION 4.6.233 SHALLOW FLOODING AREAS: 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 and manufactured homes with AO zones shall have the lowest floor (including basement) elevated at least one foot above the highest adjacent grade of the building site, to or above plus the depth number specified on the FIRM or (at least two feet if no depth number is specified).

2. New construction and substantial improvements of non-residential structures within AO zones shall either:
a. have the lowest floor (including basement) elevated one foot above the highest adjacent grade of the building site, or above plus the depth number specified on the FIRM or (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 4.6.235.
c. Require adequate drainage paths around structures on slopes to guide floodwaters around and away from proposed structures.
d. Where hazardous velocities were noted on the FIRM, consideration shall be given to mitigating the effects of these velocities through proper construction techniques and methods.

SECTION 4.6.235 COASTAL HIGH HAZARD AREA: Coastal high hazard areas (V zone) appear on FIRM's. These areas have special flood hazards associated with high velocity waters from tidal surges and hurricane wave wash; therefore, the following provisions shall apply:

1. All buildings or structures shall be located landward of the reach of the mean high tide.
2. All new construction and substantial improvements of existing development or manufactured homes in zones V1-V30 and VE (V if base flood elevation data is available) shall be elevated on pilings and columns so that:
   a. the bottom of the lowest horizontal structural member of the lowest floor (excluding the pilings or columns) is elevated one foot or more above the base flood level; and
   b. the pile or column foundation and structure attached thereto is anchored to resist flotation, collapse and lateral movement due to the effects of wind and water loads acting simultaneously on all building components. Wind and water loading values shall each have a one percent chance of being equaled or exceeded in any given year (100 year mean recurrence interval).

   A registered professional engineer or architect shall develop or review the structural design, specifications and plans for the construction and shall certify that the design and methods of construction to be used are in accordance with accepted standards of practice for meeting the provisions of (a) and (b) of this Section.

3. Obtain the elevation (in relation to mean sea level) of the bottom of the lowest structural member of the lowest floor (excluding pilings and columns) of all new and substantially improved structures in Zones V1-30, VE, and V, and whether or not such structures contain a basement. The local administrator shall maintain a record of all such information.

4. Provide that all new construction and substantial improvements within Zones V1-30, VE, and V on the community's FIRM, have the space below the lowest floor either free of obstruction or constructed with non-supporting breakaway walls, open wood lattice-work, or insect screening intended to collapse under wind and water loads without causing collapse, displacement, or other structural damage to the elevated portion of the building or supporting foundation system. For the purpose of this section, a breakaway wall shall have a design safe loading resistance of not less than 10 and no more than 20 pounds per square foot (either by design or when so required by local or State codes) may be permitted only if a registered professional engineer or architect certifies that the designs proposed meet the following conditions:

Attachment A
a. breakaway wall collapse shall result from a water load less than that which would occur during the base flood; and
b. the elevated portion of the building and supporting foundation system shall not be subject to collapse, displacement, or other structural damage due to the effects of wind and water loads acting simultaneously on all building components (structural and non-structural). Maximum wind and water loading values to be used in this determination shall each have a one percent chance of being equaled or exceeded in any given year (100 year mean recurrence interval).

5. If breakaway walls are utilized, such enclosed space shall be usable solely for parking of vehicles, building access, or storage. Such space shall not be used for human habitation.

6. Prohibit the use of fill for structural support of buildings.

7. Prohibit man-made alteration of sand dunes which would increase potential flood damage.

8. All manufactured homes to be placed or substantially improved within Zones V1-30, V, and VE on the community’s FIRM on sites i. inside of or outside of manufactured home park or subdivision; ii. or in a new manufactured home park or subdivision; iii. or in an expansion to an existing manufactured home park or subdivision; iv. or in an existing manufacture home park or subdivision on which a manufactured home has incurred “substantial damage” as the result of a flood; and v. Meet the standards of this section and that manufactured homes placed or substantially improved on other sites in an existing manufactured home park or subdivision within Zones V1-30, V, and VE on the FIRM meet the requirements.

9. Recreational vehicles placed or sited within Zones V1-30, V, and VE on the community’s FIRM either:
   a. Be on the site for fewer than 180 consecutive days;
   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 Sections 1 through 7 above.

SECTION 4.6.237 COORDINATION: It is hereby acknowledged that state building codes contain certain provisions that apply to the design and construction of buildings and structures located in Areas of Special Flood Hazard. Therefore, the Flood Hazard Overlay Zone is intended to be administered and enforced in conjunction with the state building codes. If a permit applicant needs a local permit before obtaining permits from other agencies, the County may issue a permit on the condition that all applicable local permits are or will be obtained.

SECTION 4.6.239 RESTRICTIVENESS: Where the conditions imposed by a provision of the /FP zone are more restrictive or contrary to the primary zone, the provisions of the /FP zone shall govern.

Attachment A
5.11 NATURAL HAZARDS

Plan Implementation Strategies

2a. The areas of special flood hazard, identified by the Federal Insurance Administration in a scientific and engineering report entitled "The Flood Insurance Study for Coos County" dated September 25, 2009, **March 17, 2014**, with accompanying Flood Insurance Rate Maps and Flood Boundary - Floodway Maps is hereby adopted by reference and declared to be a part of the Coos County Comprehensive Plan Inventory.

ATTACHMENT A