

Submitted by: Chair of the Assembly at the
Request of the Mayor
Prepared by: Planning Department
For reading: August 11, 2009

CLERK'S OFFICE

APPROVED

Date: 8-25-09

ANCHORAGE, ALASKA

AO NO. 2009- 97

1 AN ORDINANCE AMENDING ANCHORAGE MUNICIPAL CODE TO DELETE
2 CHAPTER 21.60 IN ITS ENTIRETY, AND AUTHORIZING SUBSECTION
3 21.04.080D. TO BE EFFECTIVE IMMEDIATELY.
4

5 WHEREAS, Anchorage Municipal Code chapter 21.04, Zoning Districts, was passed
6 and approved as provisionally adopted on May 20, 2008, the effective date to be
7 simultaneous with other chapters of title 21 in the future; and
8

9 WHEREAS, this ordinance is introduced at the Request of the Mayor and makes
10 effective immediately subsection 21.04.080D., as attached; and
11

12 WHEREAS, the new maps and ordinance text ensure the continued availability of flood
13 insurance, disaster aid, and federally backed real estate loans within the Municipality of
14 Anchorage; now, therefore,
15

16 THE ANCHORAGE ASSEMBLY ORDAINS:
17

18 Section 1. This ordinance is effective immediately upon passage and approval.
19

20 Section 2. Until the effective date of the adoption of chapter 21.14, Rules of
21 Construction and Definitions, the following definitions shall apply to subsection
22 21.04.080D.:
23

24 **Base Flood (100-Year)**

25 The flood having a one percent chance of being equaled or exceeded in any given
26 year.
27

28 **Development**

29 The initiation, construction, change, or enlargement of any use or structure, the
30 disturbance of land, or the division of land into two or more parcels.
31 "Development" shall include, but not be limited to, the following:
32

- 33 • Construction or enlargement of a building or structure;
- 34 • Change in the type of use of a building, structure, or land;
- 35 • Material increase in the intensity of use of land, such as an increase in the
36 number of businesses, offices, manufacturing establishments, or dwelling
37 units located in a building or structure or on the land;
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- 1 • Commencement or expansion of resource extraction, agricultural,
2 horticultural, or forestry activities on a parcel of land;
- 3
- 4 • Demolition of a structure or the removal of vegetation from a parcel of
5 land;
- 6
- 7 • Deposition of refuse, solid or liquid waste, or fill on a parcel of land;
- 8
- 9 • Alteration, either physically or chemically, of the shore, bank, or channel
10 of any stream, lake, or other body of water or alteration of any wetland;
11 and
- 12
- 13 • Any land-disturbing activity that adds to or changes the amount of
14 impervious or partially impervious cover on a land area or which
15 otherwise decreases the infiltration of precipitation into the soil.
16

17 **Flood and Flooding**

18
19 A general and temporary condition of partial or complete inundation of normally
20 dry land areas from:

- 21
- 22 • The overflow of inland or tidal waters.
- 23
- 24 • The unusual or rapid accumulation or runoff of surface waters from any
25 source.
- 26
- 27 • Mudslides that are proximately caused or precipitated by accumulations of
28 water on or under the ground.
29

30 The collapse or subsidence of land along the shore of a lake or other body of
31 water as a result of erosion or undermining caused by waves or currents of water
32 exceeding anticipated cyclical levels or suddenly caused by an unusually high
33 water level in a natural body of water, accompanied by a severe storm, or by an
34 unanticipated force of nature, such as a flash flood or an abnormal tide surge, or
35 by some similarly unusual or unforeseeable event which results in flooding as
36 defined in this subsection.
37

38 **Flood Insurance Rate Map (FIRM)**

39 The official map on which the Federal Insurance Administration has delineated
40 both areas of special flood hazards and the risk premium zones applicable to the
41 community.
42

43 **Flood Insurance Study**

44 The official report provided by the Federal Insurance Administration that includes
45 flood profiles, the flood boundary/floodway map, and the water surface elevation
46 of the base flood.
47

Flood Hazard Area

Land adjacent to a watercourse that includes the streambed, floodway, flood fringe, and the floodplain.

Floodplain

That area of land adjoining the channel of a river, stream, or other similar body of water which may be inundated by a flood that can reasonably be expected to occur. The floodplain, shall include all the land within the limits of the 100-year flood, and the floodway within it if such floodway is delineated.

Floodproofing

Any combination of structural and nonstructural additions, changes, or adjustments to structures which reduce or eliminate flood damage to real estate or improved real property, water and sanitary facilities, structures, and their contents.

Floodway, Regulatory

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. The boundaries of this area shall be established on the basis of the maps and reports adopted by section 21.04.060D., Flood Hazard Overlay District.

Floodway Fringe

That area of land lying between the outer limit of the regulatory floodway and the outer limit of the base flood elevation. The boundaries of this area shall be established on the basis of the maps and reports adopted by section 21.04.060D., Flood Hazard Overlay District.

Lowest Floor

The lowest floor of the lowest enclosed area, including basement or crawl space. An unfinished or flood resistant enclosure, usable solely for parking of vehicles, building access, or storage, in any 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 application nonelevation design requirements of section 21.04.060D.

Manufactured Home

A transportable, factory-built dwelling unit constructed entirely in a controlled factory environment, built to the federal Manufactured Home Construction and Safety Standards (aka HUD code).

Manufactured Home Community

A parcel, or contiguous parcels, of land divided into two or more mobile home or manufactured home lots for rent or sale.

Mean Sea Level

The average height of the sea for all states of the tide. Datum is Greater Anchorage Area Borough, Post Quake, U.S. Geodetic Survey of 1972.

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New Structures

Structures for which the start of construction commenced on or after September 25, 1979. The start of construction means the first placement of a permanent foundation and appropriate structural framing.

Obstruction

Any dam, wall, embankment, levee, dike, pile, abutment, projection, excavation, channel modification, bridge, conduit, culvert, building, wire, fence, rock, gravel, refuse, fill, structure, or matter in, along, across or projecting into any channel, watercourse, or regulatory flood hazard area which may impede, retard, or change the direction of the flow of water, either in itself or by catching or collecting debris carried by such water, or that is placed where the flow of water might carry the material downstream to the damage of life or property.

Permit, Flood Hazard

An official document issued by the municipality pursuant to this title for uses, structures, or activities listed in the floodplain regulations.

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 date. The actual start means either the first placement of permanent construction of a structure on a site, such as the pouring of slab or footings, the installation of piles, the construction of columns, or any work beyond the stage of excavation; or the placement of a manufactured home on a foundation. Permanent construction does not include land preparation, such as clearing, grading, and filling; nor does it include the installation of streets 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.

Subdivision

The division of a tract or parcel of land into two or more lots, sites, or other divisions for the purpose, whether immediate or future, of sale, lease, or building development, including any combining or resubdivision, and, when appropriate to the context, the process of subdividing or the land subdivided.

Substantial Improvement

Any repair, reconstruction, or improvement of a structure, the cost of which equals or exceeds 50% of the market value of the structure either:

- Before the improvement or repair is started; or
- If the structure has been damaged and is being restored, before the damage occurred. For the purposes of this definition, substantial improvement is considered to occur when the first alteration of any wall, ceiling, floor, or

1 other structural part of the building commences, whether or not that
2 alteration affects the external dimensions of the structure. The term does
3 not, however, include either:

- 4 1. Any project for improvement of a structure to comply with existing
- 5 state or local health, sanitary, or safety code specifications which
- 6 are solely necessary to ensure safe living conditions; or
- 7
- 8 2. Any alteration of a structure listed on the National Register of
- 9 Historic Places or a state inventory of historic places.

10 **Section 3.** Until the effective date of the remainder of chapter 21.04, as adopted on
11 May 20, 2008, all references in title 21 to chapter 21.60 shall be interpreted as references
12 to subsection 21.04.080D.

13 **Section 4.** Anchorage Municipal Code chapter 21.60 is deleted in its entirety, and the
14 Code Revisor is instructed to place a note at chapter 21.60 substantially as follows:

15
16 *Editor's Note:* Chapter 21.60 was repealed on [date of adoption of this ordinance]
17 by AO 2009-xx. Code provisions regarding flood hazards are now located in
18 subsection 21.04.080D.

19 **Section 5.** This ordinance shall become effective immediately upon its passage and
20 approval by the Assembly.

21 PASSED AND APPROVED by the Anchorage Assembly this 25th day of
22 August, 2009.

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30 Debbi Ossander
31 Chair

32 ATTEST:

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34 Beth S. Green
35 Municipal Clerk
36

MUNICIPALITY OF ANCHORAGE
Summary of Economic Effects -- General Government

AO Number: 2009-97

Title: AN ORDINANCE AMENDING ANCHORAGE MUNICIPAL CODE TO DELETE CHAPTER 21.60 IN ITS ENTIRETY, AND AUTHORIZING SUBSECTION 21.04.080D. TO BE EFFECTIVE IMMEDIATELY

Sponsor: Mayor
 Preparing Agency: Planning Department
 Others Impacted: Project Management and Engineering

CHANGES IN EXPENDITURES AND REVENUES:	(In Thousands of Dollars)				
	FY09	FY10	FY11	FY12	FY13
Operating Expenditures					
1000 Personal Services					\$ -
2000 Non-Labor					-
3900 Contributions					-
4000 Debt Service					-
TOTAL DIRECT COSTS:	\$ -	\$ -	\$ -	\$ -	\$ -
Add: 6000 Charges from Others					
Less: 7000 Charges to Others					
FUNCTION COST:	\$ -	\$ -	\$ -	\$ -	\$ -
REVENUES:					\$ -
CAPITAL:					\$ -
POSITIONS: FT/PT and Temp					0

PUBLIC SECTOR ECONOMIC EFFECTS:

The ordinance will allow the MOA to adopt the updated FEMA flood maps and is not expected to have any public sector economic effects.

PRIVATE SECTOR ECONOMIC EFFECTS:

The ordinance will allow the MOA to adopt the updated FEMA flood maps and is not expected to have any private sector economic effects.

Prepared by: Jeffrey Urbanus, Flood Hazard Administrator

Telephone: 343-8023



MUNICIPALITY OF ANCHORAGE

ASSEMBLY MEMORANDUM

No. AM 446-2009

Meeting Date: August 11, 2009

1 **FROM:** Mayor

2
3 **SUBJECT:** AN ORDINANCE AMENDING ANCHORAGE MUNICIPAL CODE
4 TO DELETE CHAPTER 21.60 IN ITS ENTIRETY, AND
5 AUTHORIZING SUBSECTION 21.04.080D. TO BE EFFECTIVE
6 IMMEDIATELY.
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8

9 The Municipal Flood Hazard Program has recently completed a project with the Federal
10 Emergency Management Agency (FEMA) to create Digital Flood Insurance Rate Maps
11 (DFIRMs) for the Municipality of Anchorage. These new flood maps will replace the
12 existing paper maps that are used to outline flood hazards within the Municipality. This
13 work was performed as part of the Municipality of Anchorage's Cooperating Technical
14 Partner (CTP) agreement with FEMA. Communities that participate in the National Flood
15 Insurance Program (NFIP) who have a CTP agreement are able to take advantage of funding
16 opportunities from FEMA and exercise greater control of the content of the regulatory flood
17 maps.

18
19 The new DFIRMs display more detailed flood hazard mapping and are better integrated
20 with existing GIS technology. One of the greatest advantages of the DFIRMs, compared to
21 previous versions of flood maps, is that the base reference information is derived from the
22 Municipality's own GIS mapping. The primary users of flood maps (homeowners, lenders,
23 and insurance companies) will be able to more easily and accurately assess potential
24 flooding hazards at a particular location.

25
26 On March 25, 2009, the Municipality of Anchorage received a Letter of Final
27 Determination (LFD) from FEMA notifying the community that the public comment-and-
28 appeal period had ended for the Preliminary DFIRMs and that it had six months to officially
29 adopt the new maps in its flood ordinance. Pending or future map changes to the DFIRMs
30 are required to use the normal Letter of Map Revision Process. The LFD also requires the
31 Municipality to review its community floodplain ordinance to ensure that it contains all of
32 the current standards of Paragraph 60.3(d) of the NFIP regulations.

33
34 New floodplain regulations were included in the provisional adoption of Chapter 21.04 of
35 the Title 21 rewrite last year. The new floodplain regulations (21.04.080D.—see
36 Attachment A) include the necessary changes in anticipation of the new DFIRMs. The
37 updates in the provisional code include recognition of the DFIRMs as the official flood
38 maps for Anchorage, as well as reference the most current language of the federal
39 regulations. Making this code effective at this time is a more logical course of action than
40 duplicating work already completed by creating a parallel set of changes in the current
41 ordinance, 21.60.

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2 Making the provisional code effective on or before September 25, 2009, enables the
3 DFIRMs to become the adopted regulatory flood maps for the Municipality of Anchorage
4 and ensures the continued availability of flood insurance, disaster aid, and federally backed
5 real estate loans within the Municipality of Anchorage.

6
7 The adopting ordinance includes flood-related definitions from the section of current code
8 that is to be deleted. These definitions will be brought forward with Chapter 21.14 of the
9 Title 21 rewrite when it is adopted later this year.

10
11 THE ADMINISTRATION RECOMMENDS APPROVAL OF AN ORDINANCE
12 AMENDING ANCHORAGE MUNICIPAL CODE TO DELETE CHAPTER 21.60 IN ITS
13 ENTIRETY, AND AUTHORIZING SUBSECTION 21.04.080D. TO BE EFFECTIVE
14 IMMEDIATELY.

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17 Prepared by: Erika McConnell, Planning Department
18 Approved by: Tom Nelson, Director, Planning Department
19 Concur: Mary Jane Michael, Executive Director
20 Office of Economic and Community Development
21 Concur: Rhonda Fehlen Westover, Acting Municipal Attorney
22 Concur: George J. Vakalis, Municipal Manager
23 Respectfully submitted, Daniel A. Sullivan, Mayor

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25
26
27 Attachment A: Provisionally Adopted Section 21.04.080D.

CHAPTER 21.04: ZONING DISTRICTS

21.04.080 OVERLAY ZONING DISTRICTS

D. FHO: Flood Hazard Overlay District

1. Purpose and Intent

The purpose of the Flood Hazard Overlay District is to promote the public health, safety, and general welfare and to minimize loss due to flood. The provisions of this section are intended to be an addition to all other land use regulations and to:

- a. Restrict or prohibit uses and structures that are dangerous to health, safety, or property in time of flood, or that cause increased flood heights or velocities;
- b. Require that uses vulnerable to floods, including public facilities that serve such uses, be provided with flood protection or flood proofing at the time of initial construction;
- c. Minimize the need for rescue and relief efforts associated with flooding and generally undertaken at the expense of the general public;
- d. Minimize prolonged business interruptions;
- e. Minimize damages to public facilities and utilities such as water and gas mains, electric, telephone and sewer lines, streets and bridges located in areas of flood hazard;
- f. Help maintain a stable tax base by providing for the sound use and development of areas of flood hazard so as to minimize future flood blight areas;
- g. Ensure that potential buyers are notified that property is in an area of flood hazard; and
- h. Ensure that those who occupy the areas of flood hazard assume responsibility for their actions.

2. Notice

Property owners affected by changes to the boundaries of the flood hazard area or by changes in the base flood elevations shall be noticed by mail.

3. Interpretation of Section; Disclaimer of Liability

- a. In the interpretation and application of this section, all provisions shall be:
 - i. Considered as minimum requirements;
 - ii. Liberally construed in favor of the governing body; and
 - iii. Deemed neither to limit nor repeal any other powers granted under state statutes.
- b. The degree of flood protection required by this section 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 section does not

imply that land outside the areas of flood hazard or uses permitted within such area will be free from flooding or flood damages. This section shall not create liability on the part of the municipality, any officer or employee thereof, or the Federal Insurance Administration for any flood damages that result from reliance on this section or any administrative decision lawfully made thereunder.

4. Creation of Flood Hazard Overlay District; Official Flood Hazard Reports and Maps

a. *Creation of District; Adoption of Reports and Maps*

There is hereby created a Flood Hazard Overlay District. This district shall be defined in its territorial extent by the following reports and maps:

- i. Flood Insurance Study for the Municipality of Anchorage, prepared by the Federal Insurance Administration, Federal Emergency Management Agency (FEMA).
- ii. Flood insurance rate map (FIRM) prepared by the Federal Insurance Administration, FEMA, including the current digital flood insurance rate map (DFIRM) prepared by the Federal Insurance Administration.
- iii. Flood boundary and floodway map, prepared by the Federal Insurance Administration, FEMA, including the current digital flood boundary and floodway map prepared by the Federal Insurance Administration.
- iv. Flood hazard boundary map (FHBM), prepared by the Federal Insurance Administration, FEMA, including the current digital flood hazard boundary map (DFHBM) prepared by the Federal Insurance Administration.

The current editions of each of the maps and reports listed in this subsection are made a part of this section. Subsequent maps and reports prepared by the Federal Insurance Administration or the municipality delineating the Flood Hazard Overlay District, floodway and floodplain areas within the municipality shall become part of this chapter upon publication. A copy of the reports and maps cited in this subsection shall be on file in the department. Definitions of terms appearing on the maps and reports appear in 41 CFR 19.09.1.

b. *Flood Hazard Areas*

Within the flood hazard overlay district, areas at a hazard for flooding include:

- i. Areas within the limit of the boundary of the base flood;
- ii. Areas within the highest extreme tide;
- iii. Areas covered in flood hazard studies prepared for the project management and engineering department that supplement the information prepared by FEMA; and
- iv. The stream setback area defined in subsection 21.07.020B.4.

c. *Review of Maps*

As necessitated by FEMA or the municipal engineer, the flood hazard district maps will be reviewed. The review may be conducted by the municipality, the U.S. Corps of Engineers, or the Federal Insurance Administration, and any new map panels or restudies affecting the boundaries of the flood hazard district, floodway, or floodway fringe area shall then be submitted to the planning and

zoning commission for a recommendation and assembly for final adoption as part of this chapter.

d. ***Rules for Interpretation of Flood Hazard Area Boundaries***

The boundaries of the flood hazard areas established by this chapter shall be determined from the cited maps and reports. Where interpretation is needed as to the exact location of the boundaries, the project management and engineering department, upon advice from the U.S. Corps of Engineers or FEMA, shall make the necessary interpretation.

5. **Regulations Applicable to Flood Hazard Overlay District**

a. ***Applicability***

The regulations within this section shall apply to all areas of the Flood Hazard Overlay District.

b. ***Prohibited Development***

i. Any encroachments, new construction, fill, obstructions, substantial improvements and other development or action within the regulatory floodway that would result in any increase in flood levels during the occurrence of a base flood are prohibited.

ii. Critical facilities shall not be located in the flood hazard area. For the purposes of this subsection only, critical facilities are defined as fire stations, police stations, hospitals, emergency shelters, schools, and emergency operations centers.

c. ***Standards for Issuance of Building or Land Use Permit***

No building permits, encroachment permits, manufactured home permits, or other land use permits shall be issued for any development activity within the Flood Hazard Overlay District unless the plans show that, in addition to compliance with all other ordinances, regulations and permit requirements, the development shall meet the following requirements:

i. Prior to final approval of a permit it must be demonstrated that all necessary permits have been received from those governmental agencies from which approval is required by federal or state law, including section 404 of the Federal Water Pollution Control Act amendments of 1972.

ii. It must be demonstrated that structures will be reasonably safe from flooding. If a proposed building site is in a floodplain, all new construction and improvements shall be designed and adequately anchored to prevent flotation, collapse or lateral movement of the structure, be constructed with materials and utility equipment resistant to flood damage, and be constructed by methods and practices that minimize flood damage.

iii. The approval of a subdivision application or multi-unit development shall require proof that:

(A) The proposed construction is consistent with the need to minimize flood damage within the floodplain;

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- (B) All public utilities and facilities such as sewer, gas, electrical and water systems are to be located and constructed to minimize or eliminate flood damage;
 - (C) Adequate drainage, as required by the *Design Criteria Manual* (current approved edition), is provided to reduce exposure to flood hazards. The actions of one project shall not adversely impact the receiving waters and the rights of other property owners, as measured by increased flood peaks, flood stage, flood erosion, and sedimentation through storm waters or drainage systems; and
 - (D) Base flood elevation data has been provided for subdivision proposals and other proposed development that contains at least 50 lots or five acres, whichever is fewer.
- iv. Construction within floodplains shall require that new and replacement water supply systems be designed to minimize or eliminate infiltration of floodwaters into the systems.
 - v. Construction within floodplains shall require that:
 - (A) New and replacement sewage systems shall be designed to minimize or eliminate infiltration of floodwaters into the systems and discharges from the systems into floodwaters; and
 - (B) On-site waste disposal systems to be located to avoid impairment to them or contamination from them during flooding.
- d. ***Storage of Materials or Equipment in the Floodplain***
The storage or processing of equipment or materials that are buoyant, flammable, explosive or injurious to safety, or which would cause a violation of state water quality standards upon contact with water, are prohibited in the floodplain.
6. **Regulations Applicable to Subdistricts**
- a. ***Floodway Area***
Since the floodway is an extremely hazardous area due to the velocity of floodwaters, which carry debris and potential projectiles and have erosion potential, the following provisions apply:
 - i. Permitted uses and structures are parks, parkways, greenbelts, land reserves, golf courses, playgrounds, playfields, and related facilities.
 - ii. Permitted accessory uses and structures are picnic tables, playground equipment, outdoor cooking facilities and like structures.
 - iii. The following structures and activities are permitted only by flood hazard permit including certification by a registered professional engineer demonstrating that such encroachments shall not result in any increase in flood levels during the occurrence of the base flood discharge or result in violation of the state water quality standards: excavation of sand, gravel and other natural resources, railroad and tramway tracks, streets,

bridges, utility installations and pipelines, storage yards for equipment and materials, commercial farming, and land reclamation.

- iv. The following uses are prohibited: landfills, storage yards containing hazardous materials (as defined by the EPA), encroachments not otherwise excepted in this section, including fill, new construction, substantial improvements and other development.

b. Floodway Fringe Area

The regulations listed in this subsection are applicable to the floodway fringe area:

- i. Permitted uses and structures are parks, parkways, greenbelts, land reserves, golf courses, playgrounds, playfields and related facilities.
- ii. Permitted accessory uses and structures are picnic tables, playground equipment, outdoor cooking facilities and like structures.
- iii. The following uses, structures and activities are permitted only by flood hazard permit: any use permitted by flood hazard permit as set forth in subsection a. of this section, and all other uses, structures and activities which are in accordance with all other land use regulations provided they are adequately floodproofed as set forth in subsection D.8. below, *Flood Hazard Permit*.
- iv. The following uses are prohibited: uses, structures and activities which are not permitted under subsections 6.b.i. through iii. of this section or which would cause violations of state water quality standards.

7. Construction Requirements

a. Generally

All new construction and substantial improvements in areas designated on the flood insurance rate map as zones A, A1-30, AE, and AH shall meet the following conditions:

- i. The lowest floor, including basement or crawl space, of residential structures shall be elevated to at least one foot above the base flood level. Within the structure, attendant utility and sanitary facilities shall be elevated to at least one foot above the base flood or completely floodproofed.
- ii. The lowest floor, including basement, of nonresidential structures shall be elevated to at least one foot above the base flood level, unless the structure, with all utility and sanitary facilities, is designed so that below base flood level the structure is watertight with walls substantially impermeable to the passage of water and so that it is capable of resisting hydrostatic and hydrodynamic loads and effects of buoyancy.
- iii. All fully enclosed areas below the lowest floor that are usable solely for parking, building access, or storage in an area other than a basement or crawlspace shall have a minimum of two openings having a total net area of not less than one square inch for every square foot of enclosed area according to FEMA specifications. The bottom of all openings shall be no higher than one foot above grade. Openings may be equipped

with screens, louvers or other coverings or devices provided that they permit the automatic entry and exit of floodwaters.

- iv. Where floodproofing is utilized a registered professional engineer or architect shall certify that the floodproofing methods are adequate.
 - v. For new manufactured home parks and manufactured home subdivisions; for expansions to existing manufactured home parks and manufactured home subdivisions; for existing manufactured home parks and manufactured home subdivisions where the repair, reconstruction or improvement of the streets, utilities and pads equals or exceeds 50 percent of value of the streets, utilities and pads before the repair, reconstruction or improvement has commenced; and for manufactured homes not placed in a manufactured home park or manufactured home subdivision, require that the repair, and on all property not within a manufactured home park or subdivision stands or lots are elevated on compacted fill or on pilings so that:
 - (A) The lowest floor of each manufactured home must be at least one foot above the base flood level.
 - (B) Adequate surface drainage and access for a hauler must be provided.
 - (C) For manufactured homes placed on pilings, pilings must be stable and no more than ten feet apart and reinforced if more than six feet above the ground level.
 - (D) Lots must be large enough to permit steps.
 - vi. All manufactured homes to be placed or substantially improved shall be elevated on a permanent foundation such that the lowest floor of the manufactured home is at least one foot above the base flood elevation, and be securely anchored to an adequately anchored foundation system.
 - vii. 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.
- b. ***Standards for Shallow Flood Areas (AO Zones)***
Shallow flooding areas appear on the Flood Insurance Rate Maps as AO zones with depth designations. The base flood depths in these zones range from one to three 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:
- i. New construction and substantial improvements of residential structures within AO zones shall have the lowest floor, including basement or crawl space, elevated above the highest adjacent grade of the building site, to at least one foot above the depth number specified on the Flood Insurance Rate Map (at least two feet if no depth number is specified).

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- ii. 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 at least one foot above the depth number specified on the Flood Insurance Rate Map (at least two feet if no depth number is specified); or
 - (B) Together with attendant utility and sanitary facilities, be completely floodproofed 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.
 - iii. Adequate drainage paths are required around structures on slopes to guide floodwaters around and away from proposed structures.
- 8. Flood Hazard Permit**
- a. **Required**
No person shall engage in development within the Flood Hazard Overlay District unless a flood hazard permit is first issued, pursuant to section 21.03.090, *Flood Hazard Permits*.
 - b. **Conditions**
Special conditions may be attached as a condition to the issuance of a flood hazard permit. Conditions shall include any floodproofing measures deemed necessary by the issuing official to further the purposes of this chapter. Floodproofing measures may include requirements that:
 - i. The finished surface of the first or main floor shall be at least one foot above the level of the regulatory flood protection elevation.
 - ii. Structures or uses below the level of the regulatory flood shall be restricted to those not involving habitual human habitation, such as working space, living space, sleeping space, etc.
 - iii. The anchorage shall be suitable to resist flotation and lateral movement.
 - iv. For all construction and substantial improvements, fully enclosed areas below the lowest floor that are subject to flooding shall be designed to automatically equalize hydrostatic flood forces on exterior walls by allowing for the entry and exits 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 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 to FEMA specifications. The bottom of all openings shall be no higher than one foot above grade. Openings may be equipped with screens, louvers or other coverings or devices provided that they permit the automatic entry and exits of floodwaters.

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- v. All areas below the level of the regulatory flood protection levels shall be coated with paint, membranes, or mortars substantially impermeable to the passage of water.
 - vi. Water supply and waste treatment systems must prevent infiltration of water.
 - vii. All interior drains must be connected to the sanitary sewer system.

9. Nonconforming Uses

A structure or the use of a structure or premises located within the Flood Hazard Overlay District that was lawful before the original passage of applicable regulations, but that is not in conformity of the provisions of such regulations, may be continued subject to the following conditions:

- a. No such use shall be expanded, changed, enlarged, or altered in any way which increases its nonconformity with respect to the provisions of this chapter.
- b. If such use is discontinued for 12 consecutive months, any future use of the structure or premises shall conform to this chapter.
- c. Uses or adjuncts thereof which are or have become nuisances shall not be entitled to continuance as nonconforming uses.
- d. Any permitted alteration, addition, or repair to any nonconforming structure the cost of which equals or exceeds 50 percent of the fair market value of the structure which would result in substantially increasing the flood damage potential shall be adequately floodproofed in accordance with subsection 8.b.

10. Duties of the Director of the Project Management and Engineering Department

- a. The director of the project management and engineering department shall grant or deny development permit applications in accordance with the provisions of this chapter, except that the platting board is directed and authorized to consider this chapter in relation to any matter brought before that board.
- b. The director of the project management and engineering department shall maintain all records required by the Federal Insurance Administration and shall file an annual report with the federal insurance administrator.
- c. Additional duties and responsibilities of the director of the project management and engineering department are as follows:
 - i. *Permit Review*
The director of the project management and engineering department shall:
 - (A) Review all flood hazard permits to determine that the permit requirements of this chapter have been satisfied.
 - (B) Review all flood hazard permits to determine that all necessary permits have been obtained from those federal, state, or local governmental agencies from which prior approval is required.

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- (C) Review all flood hazard permits to determine if the proposed development is located in the floodway, and, if located in the floodway, ensure that the encroachment provisions of subsection 6.a. above are met.
- ii. *Use of Other Base Flood Data*
When base flood elevation data have not been provided in accordance with subsection D.3. above, the director of the project management and engineering department shall obtain, review and reasonably utilize any base flood elevation data available from a federal, state or other source in order to administer subsections D.6. through D.9. above.
- iii. *Information to be Obtained and Maintained*
The director of the project management and engineering department shall:
- (A) Obtain and record the actual 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.
- (B) 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 subsection 7.a.iv. above.
- (C) Maintain for public inspection all records pertaining to the provisions of this section.
- iv. *Duties Regarding Alteration of Watercourses*
The director of the project management and engineering department shall:
- (A) Notify adjacent communities and the state coordinating agency 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 the watercourse so that the flood-carrying capacity is not diminished.
- v. *Interpretation of FIRM Boundaries*
The director of the project management and engineering department shall make interpretations, where needed, as to exact location of the boundaries of the areas of flood hazard, 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 subsection D.11. below.

11. Appeal Procedure

Appeals alleging error by the director of the project management and engineering department charged with the enforcement or interpretation of this chapter may be taken to the zoning board of examiners and appeals in accordance with the provisions of section 21.03.050, *Appeals*.

12. Standards and Conditions for Variances and Appeals

a. In passing upon variances or appeals, the zoning board of examiners and appeals shall consider all technical evaluations, all relevant factors, standards specified in other sections of this section and:

- i. The danger that materials may be swept onto other lands to the injury of others;
- ii. The danger to life and property due to flooding or erosion damage;
- iii. The susceptibility of the proposed facility and its contents to flood damage and the effect of such damage on the individual owner;
- iv. The importance of the services provided by the proposed facility to the community;
- v. The necessity of the facility of a waterfront location, where applicable;
- vi. The availability of alternative locations for the proposed use which are not subject to flooding or erosion damage;
- vii. The compatibility of the proposed use with existing and anticipated development;
- viii. The relationship of the proposed use to the comprehensive plan and floodplain management program for that area;
- ix. The safety of access to the property in time of flood for ordinary and emergency vehicles;
- x. The expected heights, velocity, duration, rate of rise and sediment transport of the floodwaters and the effects of wave action, if applicable, expected at the site; and
- xi. 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.

b. Generally, variances may be issued for new construction and substantial improvements to be erected on a lot of one-half acre or less in size contiguous to and surrounded by lots with existing structures constructed below the base flood level, providing the items in subsections 12.a.i. through xi. of this section have been fully considered. As the lot size increases beyond one-half acre, the technical justification required for issuing the variance increases.

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- c. The zoning board of examiners and appeals may attach such conditions to the granting of variances or appeals as it deems necessary to further the purposes of this chapter.
 - d. The director of the project management and engineering department shall maintain the records of all variance and appeal actions and report any variances to the Federal Insurance Administration upon request.
 - e. Conditions for variances are as follows:
 - i. 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 the remainder of this section.
 - ii. Variances shall not be issued within any designated floodway if any increase in flood levels during the basic flood discharge would result.
 - iii. Variances shall only be issued upon a determination that the variance is the minimum necessary, considering the flood hazard, to afford relief.
 - iv. Variances shall only be issued upon:
 - (A) A showing of good and sufficient cause;
 - (B) A determination that failure to grant the variance would result in exceptional hardship to the applicant; and
 - (C) A determination that the granting of a variance will not result in increased flood heights, additional threats to public safety, or extraordinary public expense, create nuisances, cause fraud on or victimization of the public, or conflict with existing local laws or ordinances.
 - v. 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.

MUNICIPALITY OF ANCHORAGE
Summary of Economic Effects -- General Government

AO Number:

Title: AN ORDINANCE AMENDING ANCHORAGE MUNICIPAL CODE TO DELETE CHAPTER 21.60 IN ITS ENTIRETY, AND AUTHORIZING SUBSECTION 21.04.080D. TO BE EFFECTIVE IMMEDIATELY

Sponsor: Mayor
 Preparing Agency: Planning Department
 Others Impacted: Project Management and Engineering

CHANGES IN EXPENDITURES AND REVENUES:	(In Thousands of Dollars)				
	<u>FY09</u>	<u>FY10</u>	<u>FY11</u>	<u>FY12</u>	<u>FY13</u>
Operating Expenditures					
1000 Personal Services					\$ -
2000 Non-Labor					-
3900 Contributions					-
4000 Debt Service					-
TOTAL DIRECT COSTS:	\$ -	\$ -	\$ -	\$ -	\$ -
Add: 6000 Charges from Others					
Less: 7000 Charges to Others					
FUNCTION COST:	\$ -	\$ -	\$ -	\$ -	\$ -
REVENUES:					\$ -
CAPITAL:					\$ -
POSITIONS: FT/PT and Temp					0

PUBLIC SECTOR ECONOMIC EFFECTS:

The ordinance will allow the MOA to adopt the updated FEMA flood maps and is not expected to have any public sector economic effects.

PRIVATE SECTOR ECONOMIC EFFECTS:

The ordinance will allow the MOA to adopt the updated FEMA flood maps and is not expected to have any private sector economic effects.

Prepared by: Jeffrey Urbanus, Flood Hazard Administrator

Telephone: 343-8023

Content ID: 007980

Revision: 0

Type: Ordinance - AO

Title: AN ORDINANCE AMENDING ANCHORAGE MUNICIPAL CODE TO DELETE CHAPTER 21.60 IN ITS ENTIRETY, AND AUTHORIZING SUBSECTION 21.04.080D. TO BE EFFECTIVE IMMEDIATELY.

Author: perrysu

Initiating Dept: Planning

Select Routing: Standard

Review Depts: PME

Description: Ordinance amending AMC to delete Chapter 21.60 and authorizing Subsection 21.04.080D. to be effective immediately - Flood Ordinance.

Keywords: Flood Ordinance

Date Prepared: 7/22/09 1:34 PM

Director Name: Tom Nelson

Addnl Dept Review ?: No

Addnl Review Depts:

Mayor Review?: No

Requested Assembly Meeting Date 8/11/09 12:00 AM
MM/DD/YY:

-Revision 0 [View full history](#)

8/3/09 8:40 AM	007980	0	Step1	Joy Maglaqui	Exit	Public
8/3/09 8:40 AM	007980	0	Step1	Joy Maglaqui	Approve	Public
8/3/09 8:40 AM	007980	0	Step1	Joy Maglaqui	Approve	Public
7/31/09 4:26 PM	007980	0	Step1	Rhonda Westover	Approve	Public
7/31/09 3:10 PM	007980	0	Step1	Cheryl Frasca	Approve	Public
7/31/09 2:48 PM	007980	0	Step1	Cheryl Frasca	Approve	Public
7/23/09 3:27 PM	007980	0	Step1	Jerry Hansen	Approve	Public
7/23/09 11:21 AM	007980	0	Step1	Tawny Klebesadel	Approve	Public
7/23/09 9:15 AM	007980	0	Step1	nelsontp	Approve	Public