

Chapter 14.34

FLOOD DAMAGE PREVENTION

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14.34.005 Definitions.

Refer to Chapter 14.04 SCC for definitions of terms used in this Chapter. (Ord. O20070002 (part))

14.34.010 Statutory authorization.

The Legislature of the State of Washington has in Chapter 36.70 RCW delegated the responsibility to local governmental units to adopt regulations designed to promote the public health, safety, and general welfare of its citizens. Therefore, the County of Skagit, State of Washington, does ordain the provisions set forth in this Chapter. (Ord. O20070002 (part); Ord. 17938 Attch. F (part), 2000)

14.34.020 Findings of fact.

(1) The special flood hazard areas of Skagit 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, and impairment of the tax base, all of which adversely affect the public health, safety and general welfare.

1 (2) These flood losses are caused by the cumulative effect of obstructions in areas of special flood
2 hazards, which increase flood heights and velocities, and when inadequately anchored, damage uses in
3 other areas. Uses that are inadequately floodproofed, elevated or otherwise protected from flood damage
4 also contribute to the flood loss. (Ord. O20070002 (part): Ord. 17938 Attch. F (part), 2000)

5 **14.34.030 Statement of purpose.**

6 It is the purpose of this Chapter to promote the public health, safety, and general welfare, and to
7 minimize public and private losses due to flood conditions in specific areas by provisions designed:

8 (1) To protect human life and health;

9 (2) To minimize expenditure of public money and costly flood control projects;

10 (3) To minimize the need for rescue and relief efforts associated with flooding and generally
11 undertaken at the expense of the general public;

12 (4) To minimize prolonged business interruption;

13 (5) To minimize damage to public facilities and utilities such as water and gas mains, electric,
14 telephone and sewer lines, streets and bridges located in areas of special flood hazard;

15 (6) To help maintain a stable tax base by providing for the sound use and development of areas of
16 special flood hazard so as to minimize future flood blight areas;

17 (7) To ensure that potential buyers are notified that property is in an area of special flood hazard;
18 and

19 (8) To ensure that those who occupy the areas of special flood hazard assume responsibility for their
20 actions.

21 [\(9\) To retain the natural channel, shoreline, and floodplain creation processes and other natural](#)
22 [floodplain functions that protect, create, and maintain habitat for threatened and endangered species.](#)

23 [\(10\) To prevent or minimize loss of hydraulic, geomorphic, and ecological functions of floodplains](#)
24 [and stream channels.](#)

25 It is the purpose of this Chapter to protect the public health, safety and welfare in those areas subject
26 to periodic inundation due to flooding, and to minimize losses due to flood conditions in the specific areas
27 subject to this Chapter by utilizing the methods and provisions set forth herein. (Ord. O20070002 (part):
28 Ord. 17938 Attch. F (part), 2000)

29 **14.34.040 Methods of reducing flood losses.**

30 In order to accomplish its purpose, this Chapter and Chapters 14.26 and 14.32 SCC include methods
31 and provisions for:

32 (1) Restricting or prohibiting uses which are dangerous to health, safety, and property due to water
33 or erosion hazards, or which result in damaging increases in erosion or in flood heights or velocities;

34 (2) Requiring that uses vulnerable to floods, including facilities which serve such uses, be protected
35 against flood damage at the time of initial construction;

36 (3) Controlling the alteration of natural floodplains, stream channels, and natural protective barriers,
37 which help accommodate or channel floodwaters;

38 (4) Controlling filling, grading, dredging, and other development which may increase flood
39 damage; and

40 (5) Preventing or regulating the construction of flood barriers which will unnaturally divert
41 floodwaters or which may increase flood hazards in other areas. (Ord. O20070002 (part): Ord. 17938
42 Attch. F (part), 2000)

43 **14.34.050 Basis for establishing areas of special flood hazard.**

44 [\(1\)](#) The areas of special flood hazard identified by the Federal Insurance Administration in a
45 scientific and technical engineering report entitled "Flood Insurance Study for the Unincorporated Areas
46 of Skagit County Washington," dated January 3, 1985, with accompanying flood insurance rate and
47 floodway maps and subsequent revisions, is hereby adopted by reference and declared to be a part of this

1 Chapter. The Flood Insurance Study is on file with Skagit County Planning and Development Services.
2 (Ord. O20070002 (part); Ord. 17938 Attch. F (part), 2000)

3 (2) All new hydrologic and hydraulic flood studies conducted pursuant to this section shall consider
4 future conditions and the cumulative effects from anticipated future land use changes in accordance with
5 Regional Guidance for Hydrologic and Hydraulic Studies in Support of the Model Ordinance for
6 Floodplain Management under the National Flood Insurance Program and the Endangered Species Act,
7 FEMA Region X, 2010. If there is an existing study that meets the rest of this ordinance's criteria, it may
8 be used, even if it does not account for future conditions.
9

10 **14.34.055 Protected Review Area.**

11 The Protected Review Area is comprised of, and shall be the greater of those lands that lie within the
12 boundaries of the floodway, the Riparian Habitat Zone (RHZ), and the Channel Migration Area (CMA).
13 The Riparian Habitat Zone and Channel Migration Area are defined as follows:

14 (1) The Riparian Habitat Zone includes streams, watercourses and adjacent land areas within the
15 special flood hazard area (SFHA). The width of the RHZ shall be 250 feet from all Waters of the State
16 (as defined under WAC 222-16-030) within the SFHA as determined under SCC 14.24.500

17 (2) The Channel Migration Area (CMA) shall be the channel migration zone plus 50 feet, where such
18 migration zones have been delineated on a map or maps that have been adopted by Skagit County for
19 regulatory purposes. When such maps become adopted, they shall be incorporated as a part of this
20 chapter and shall be used in accordance with this section.

21 (a) Exception. Maintained levees subject to annual Corps of Engineers inspections shall be
22 deemed to be the boundaries of the Channel Migration Area.

23 **14.14.34.060 Compliance.**

24 Any construction, location, extension, conversion, or alteration of a structure or land identified in a
25 special flood hazard area shall fully comply within the requirements of this Chapter, Chapter 86.16 RCW,
26 and Chapter 173-158 WAC. (Ord. O20070002 (part); Ord. 17938 Attch. F (part), 2000)

27 **14.34.070 Abrogation and greater restrictions.**

28 This Chapter is not intended to repeal, abrogate, or impair any existing easements, covenants, or deed
29 restrictions. However, where this Chapter and another chapter, ordinance, easement, covenant, or deed
30 restriction conflict or overlap, whichever imposes the more stringent restrictions shall prevail. (Ord.
31 O20070002 (part); Ord. 17938 Attch. F (part), 2000)

32 **14.34.080 Interpretation.**

33 In the interpretation and application of this Chapter, all provisions shall be:

34 (1) Considered as minimum requirements;

35 (2) Liberally construed in favor of the governing body; and

36 (3) Deemed neither to limit nor repeal any other powers granted under State statutes. (Ord.
37 O20070002 (part); Ord. 17938 Attch. F (part), 2000)

38 **14.34.090 Warning and disclaimer of liability.**

39 The degree of flood protection required by this Chapter is considered reasonable for regulatory
40 purposes and is based on scientific and engineering considerations. Larger floods can and will occur on
41 rare occasions. Flood heights may be increased by manmade or natural causes. This Chapter does not
42 imply that land outside the areas of special flood hazards or uses permitted within such areas will be free
43 from flooding or flood damages. This Chapter shall not create liability on the part of Skagit County, any
44 officer or employee thereof, or the Federal Insurance Administration, for any flood damages that result
45 from reliance on this Chapter or any administrative decision lawfully made there under. (Ord. O20070002
46 (part); Ord. 17938 Attch. F (part), 2000)

1 **14.34.100 ~~Development~~Floodplain development permits.**

2 A floodplain development permit, processed per Chapter 14.06 SCC, shall be obtained prior to
3 construction or development on any property within a special flood hazard area as established in SCC
4 14.34.050. The permit ~~shall be~~ is required for all structures and development activities as defined in
5 Chapter 14.04 SCC. (Ord. O20070002 (part): Ord. 17938 Attch. F (part), 2000), as well as those activities
6 listed in subsection (1) below that may or may not otherwise require a development permit.

7 (1) Activities.

8 (a) Septic tanks and drain fields.

9 (b) Dumping or storage of toxic or hazardous waste materials, or other contaminants, in any
10 quantity.

11 (c) Utility and road maintenance work not exempted pursuant to subsection (2) below.

12 (2) Exemptions. The following activities are exempt from the requirement to obtain a floodplain
13 development permit.

14 (a) Routine maintenance of landscaping that does not involve grading, excavation, or filling.

15 (b) Removal of noxious weeds and hazard trees and replacement of non-native vegetation with
16 native vegetation, provided the applicant complies with SCC14.24, Critical Areas Ordinance.

17 (c) Normal maintenance of structures, such as re-roofing and replacing siding, provided such
18 work does not require a building permit and does not qualify as a substantial improvement.

19 (d) Normal maintenance of above ground public utilities and facilities, such as replacing
20 downed power lines.

21 (e) Normal street and road maintenance, including filling potholes, repaving, and installing
22 signs and traffic signals, but does not include expansion of gravel or paved areas.

23 (f) Normal maintenance of a levee or other flood control facility prescribed in the operations
24 and maintenance plan for the levee or flood control facility.

25 (g) Planting, harvesting, livestock management, and other normal farm or agricultural practices
26 and activities, other than structures and filling for structural support, provided that compliance with
27 SCC14.24 Critical Areas Ordinance is met.

28 **14.34.110 Applications.**

29 Applications for permits shall be made on forms provided by the Administrative Official. As a
30 minimum, the following information shall be provided by the applicant at the time of submittal:

31 (1) Vicinity map.

32 (2) Description of the project.

33 (3) Two copies of the site plans drawn to scale that demonstrate the location and dimensions of the
34 property, existing or proposed structures, fill and/or excavations, storage of material, drainage facilities,
35 suspected critical areas per Chapter 14.24 SCC, and private or public utilities including sewage. The site
36 plan shall also include the following information:

37 (a) The elevations and boundaries of the 10, 50, and 100 year floods, where such information is
38 available.

39 (b) The boundaries of both the SFHA as defined in SCC 14.34.050, and the Protected Review
40 Area as defined in SCC 14.34.055, where applicable.

41 (c) Areas of compensatory storage per SCC 14.34.150(4), where applicable.

42 (4) Floodproofing verification when required per SCC 14.34.140.

43 (5) Description of the extent to which any watercourse will be altered or relocated as a result of
44 proposed development.

45 (6) Where a permit is required for the repair, reconstruction or addition to any repetitive loss
46 structure, as defined in Chapter 14.04 SCC (Definitions), such structure shall be required to meet the
47 provisions of SCC 14.34.140, 14.34.160(1) and (3), and 14.34.170. Value for the structure shall be
48 demonstrated by the current tax assessed value or by private appraisal at the expense of the applicant.
49 Construction costs shall be demonstrated by a properly prepared construction bid from a currently

1 licensed contractor or the valuation used by the Administrative Official for determining building permit
2 fees.

3 [\(7\) Habitat Impact Assessment checklist or, if within the Protected Review Area, a Fish and Wildlife](#)
4 [Habitat Conservation Area Site Assessment prepared consistent with SCC 14.34.220\(1\) and SCC](#)
5 [14.24.520.](#)

6 [\(8\) Notice on Title pursuant to SCC 14.34.150\(5\).](#)

7 ~~(79)~~ The Administrative Official may require additional information when deemed necessary to
8 determine the degree of flood protection required.

9 ~~(810)~~ Permit fees shall be paid at the time application is submitted as prescribed in Planning and
10 Development Services Department's adopted fee schedule. The Skagit County Board of County
11 Commissioners may waive, by resolution, all permit fees for the repair of flood damages incurred during
12 a local, State or Federally declared disaster. To be eligible for a fee waiver, the permit applicant shall
13 provide access to the structure for the purposes of damage assessment by County personnel under the
14 direction of the Administrative Official; or provide damage assessment reports prepared by the American
15 Red Cross, FEMA, SBA, or a licensed insurance adjuster. The permit fee waiver applies only to that
16 construction or repair that is necessary for restoration to pre-flood conditions. (Ord. O20070002 (part):
17 Ord. 17938 Attch. F (part), 2000)

18 **14.34.120 Administrative Official—Duties.**

19 (1) Duties of the Administrative Official or designee shall include but not be limited to:

20 (a) Reviewing all development permits to determine that the permit requirements of this
21 Chapter have been satisfied;

22 (b) Reviewing all development permits to determine that all necessary permits have been
23 obtained from those Federal, State or local governmental agencies from which prior approval is required;

24 (c) Reviewing all development permits to determine if the proposed development is located in
25 the floodway and, if located in the floodway, assuring that the encroachment provisions of SCC
26 14.34.190(1) are met.

27 [\(d\) Maintain for public inspection all records pertaining to the provisions of this chapter.](#)

28 [\(e\) Submit reports as required for the National Flood Insurance Program.](#)

29 (2) Use of Other Base Flood Data.

30 (a) When base flood elevation data has not been provided in accordance with SCC 14.34.050,
31 the Administrative Official or designee shall obtain, review, and reasonably utilize any base flood
32 elevation and floodway data available from a Federal, State, or other source, in order to administer SCC
33 14.34.160, 14.34.170, 14.34.180 and 14.34.190.

34 (3) Information to Be Obtained and Maintained. The Administrative Official shall obtain and
35 maintain for public inspection:

36 (a) Elevation certificates per SCC 14.34.140;

37 (b) Floodproofing certificates per SCC 14.34.140;

38 (c) Professional engineer's or architect's certification of compliance to design standards when
39 required by this Chapter;

40 (d) All records pertaining to the provisions of this Chapter.

41 (4) Alteration of Watercourses. The Administrative Official or designee shall:

42 (a) Notify adjacent communities and the Department of Ecology prior to any alteration or
43 relocation of a watercourse when proposed and submit evidence of such notification to the Federal
44 Insurance Administration;

45 (b) Require that maintenance be provided within the altered or relocated portion of said
46 watercourse so that the flood carrying capacity is not diminished.

47 (5) Interpretation of FIRM Boundaries.

48 (a) The Administrative Official or designee shall make interpretations where needed, as to
49 approximate field location of the boundaries of the areas of special flood hazards (for example, where
50 there appears to be a conflict between a mapped boundary and actual field conditions). The person

1 contesting the location of the boundary shall be given a reasonable opportunity to appeal the
2 interpretation as provided in SCC 14.34.130. (Ord. O20070002 (part): Ord. 17938 Attch. F (part), 2000)

3 **14.34.130 Variances and appeals.**

4 (1) Appeals.

5 (a) When it is alleged there is an error in any requirement, decision, or determination made by
6 the Administrative Official in the enforcement or administration of this Chapter, those aggrieved, or any
7 citizen, may appeal such decision as provided in Chapter 14.06 SCC (Permit Procedures).

8 (2) Variances.

9 (a) Requests for variances from the provisions of this Chapter shall be considered pursuant to
10 Chapter 14.10 SCC (Variances).

11 (b) Limitations. Variances shall be limited solely to the consideration of:

12 (i) Elevation requirements for first floor construction;

13 (ii) Elevation requirements for floodproofing; and

14 (iii) The type and extent of required floodproofing.

15 (c) A granting of any variance shall not result in:

16 (i) Increased flood heights;

17 (ii) Additional threats to public safety;

18 (iii) Extraordinary public expense;

19 (iv) Creation of nuisances;

20 (v) Fraud on or victimization of the public;

21 (vi) Conflicts with other existing local laws or ordinances.

22 (vii) [Adverse effects to species protected under the Endangered Species Act.](#)

23 (d) Notification. All decisions to grant a variance pursuant to this Chapter shall contain
24 notification to the applicant that:

25 (i) The issuance of a variance may result in increased premium rates for flood insurance.

26 (ii) Construction below base flood elevation increases risks to life and property. (Ord.

27 O20070002 (part): Ord. 17938 Attch. F (part), 2000)

28 **14.34.140 Elevation and floodproofing certification required.**

29 Where new construction or substantial improvements of any residential, commercial, industrial or
30 other nonresidential use structure is located in an area where base flood elevation data has been provided,
31 the following provisions apply:

32 (1) Responsibility. The proponent of a project shall provide required certification data to the
33 Administrative Official. All elevation and floodproofing data specified must be certified by a professional
34 land surveyor where the project is located within A1-A10, A12, A14, A16, A18, A21-A22, and all V
35 zones.

36 (2) Form. Elevation or floodproofing certificates shall be on forms as required by FEMA. Forms
37 shall be available from the Administrative Official.

38 (3) Minimum Information.

39 (a) Actual elevation of the lowest floor (including basement).

40 (b) Actual elevation to which the building has been floodproofed.

41 (4) Alternate Methods. Where an alternate method of floodproofing nonresidential use structures is
42 proposed, it shall be certified and demonstrated that flood damages will not occur.

43 (5) Agricultural and Utility Buildings. Agricultural and utility buildings classified as U occupancies
44 under the provisions of the currently adopted Building Code and constructed in accordance with the wet
45 floodproofing standards of SCC 14.34.160(4) shall not require elevation certificates. (Ord. O20070002
46 (part): Ord. 17938 Attch. F (part), 2000)

1 **14.34.150 General standards for special flood hazard areas.**

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

3 (1) Siting of structures. If a lot has a buildable site out of the SFHA, all new structures must be
4 located in that area. If the lot is fully within the SFHA, structures must be located to have the least impact
5 on habitat as possible by locating structures as far from the water body as possible or placing the
6 structures on the highest ground on the lot. All new structures shall be set back from the Protected
7 Review Area a minimum of 15 feet, unless the applicant can demonstrate that the structure is not likely to
8 adversely affect species protected under the Endangered Species Act, as demonstrated through the Habitat
9 Impact Assessment process set forth in SCC 14.34.220.

10 (2) Stormwater. Construction in the SFHA shall incorporate low impact development techniques
11 where technically feasible to minimize or avoid stormwater effects, such as those described in the
12 Technical Guidance Manual for Puget Sound.

13 (3) Impervious surfaces. Creation of new impervious surfaces shall not exceed 10 percent of the
14 surface area of the portion of the lot in the SFHA unless it is demonstrated that there will be no net
15 increase in the rate and volume of stormwater surface runoff that will leave the site or that the impact is
16 mitigated.

17 (4) Floodplain storage. Any loss of floodplain storage shall be avoided, rectified or compensated
18 for within the SFHA.

19 (a) Exception: Areas located landward of maintained levees subject to annual Corps of
20 Engineers inspections, and not hydraulically connected to the source of flooding, need not provide
21 compensatory storage.

22 (5) Notice on Title. The applicant for a floodplain development permit shall record on the title to
23 the property, on a form approved by the Administrative Official, a notice that a portion of the property is
24 in the SFHA. A final recorded land division pursuant to SCC 14.18 shall include a notice that a portion
25 of the property is in the SFHA.

26 ~~(6)~~ Anchoring.

27 (a) All new construction and substantial improvements shall be anchored to prevent flotation,
28 collapse or lateral movement of the structure.

29 (b) All manufactured homes must be placed on a permanent foundation and be anchored to
30 prevent flotation, collapse or lateral movement, and shall be installed to minimize flood damage.
31 Independent footings supporting manufactured homes shall be placed a minimum of 12 inches below pre-
32 development grade before any fill is installed. Fill shall be protected from erosion.

33 (c) All propane (LPG) and home heating oil tanks located above-ground shall be adequately
34 supported and anchored to the ground in such a way that will prevent collapse, overturning, displacement
35 or flotation resulting from floodwaters or waterborne debris.

36 ~~(7)~~ Recreational Vehicles.

37 (a) Recreational vehicles shall not be used as permanent dwelling units.

38 (b) When located in special flood hazard areas designated as A, A1-A10, A12, A14, A16, A18,
39 A21-A22, V1, V4, AO and AH, the vehicle shall:

40 (i) Be on site for fewer than 180 consecutive days; or

41 (ii) Be fully licensed and ready for highway use without the requirement for special
42 highway permits, be on its wheels or jacking system, be attached to the site only by quick disconnect type
43 utilities and security devices, and have no permanently attached additions.

44 ~~(8)~~ Construction Materials and Methods.

45 (a) Where construction occurs below the BFE, all new construction and substantial
46 improvements shall be constructed with materials and utility equipment resistant to flood damage
47 including, but not limited to, studs and wall plates, wall sheathing, insulation, interior wall finishes,
48 exterior wall finishes or siding, etc.

49 (b) All new construction and substantial improvements shall be constructed using methods and
50 practices that minimize flood damage.

1 (c) Electrical, heating, ventilation, plumbing, and air conditioning equipment and other service
2 facilities shall be designed and/or otherwise elevated to a level of 1 foot above base flood elevation or
3 located so as to prevent water from entering or accumulating within the components during conditions of
4 flooding. Ducts that serve mechanical equipment shall be elevated and located so that the entire duct is
5 above the base flood elevation.

6 (d) Buildings utilizing crawl space construction, where any portion of the crawl space is below
7 the grade on all sides, shall meet the following requirements as excerpted from FEMA Technical Bulletin
8 11-01, which is hereby adopted by reference.

9 (i) Crawl space construction is not permitted in V zones.

10 (ii) Crawl space construction is not permitted in zones A0 and A1-A30 where velocities
11 exceed 5 feet per second, unless it can be shown through engineering analysis that the structural
12 components will resist flotation, collapse and lateral movement from hydrodynamic and hydrostatic loads,
13 including the effects of buoyancy.

14 (iii) The interior grade of a crawl space must not be more than 2 feet below the lowest
15 adjacent exterior grade.

16 (iv) The height of the crawl space, measured from the interior grade of the crawl space to
17 the top of the foundation wall must not exceed 4 feet at any point. The height measured from the crawl
18 space grade to the top of the next higher floor shall not exceed 5 feet at any point.

19 (v) There must be an adequate drainage system that removes floodwaters from the interior
20 area of the crawl space, within a reasonable time, after a flood event.

21 | ~~(49)~~ Utilities.

22 (a) All new and replacement water supply systems shall be designed to minimize or eliminate
23 infiltration of floodwaters into the system;

24 (b) New and replacement sanitary sewage systems shall be designed to minimize or eliminate
25 infiltration of floodwaters into the systems and discharge from the systems into floodwaters;

26 (c) On-site disposal systems shall be located to avoid impairment to them or contamination
27 from them during flooding.

28 | ~~(510)~~ Subdivision Proposals.

29 (a) All subdivision proposals shall be consistent with the need to minimize flood damage;

30 (b) All subdivision proposals shall have public utilities and facilities such as sewer, gas,
31 electrical, and water systems located and constructed to minimize flood damage;

32 (c) All subdivision proposals shall have adequate drainage provided to reduce exposure to flood
33 damage; and

34 (d) Where base flood elevation data has not been provided or is not available from another
35 authoritative source, it shall be provided by the proponent, generated for subdivision proposals and other
36 proposed developments which contain at least 50 lots or 5 acres, whichever is less.

37 (e) The final recorded land division pursuant to SCC 14.18 shall include a notice that part of
38 the property is in the SFHA.

39 | ~~(611)~~ Review of Building Permits.

40 (a) Where flood elevation data is not available, applications for building permits shall be
41 reviewed to assure that proposed construction will be reasonably safe from flooding. The test of
42 reasonableness is a local judgment and includes use of historical data, high water marks, photographs of
43 past flooding, etc., where available. Failure to elevate at least 2 feet above grade in these zones may result
44 in higher insurance rates. (Ord. O20070002 (part); Ord. O20020010 (part); Ord. O20020003 (part); Ord.
45 17938 Atch. F (part), 2000. Formerly 14.34.160)

46 **14.34.160 Specific standards for construction in special flood hazard areas.**

47 In all areas of special flood hazard where base flood elevation data has been provided as set forth in
48 SCC 14.34.050 or 14.34.120(2), the following provisions are required in addition to the general
49 regulations per SCC 14.34.150:

50 (1) Residential Construction.

1 (a) New construction and substantial improvement of any residential structure shall have the
2 finished floor elevation of the lowest floor elevated 1 foot or more above the base flood elevation. Fully
3 enclosed areas below the lowest floor that are subject to flooding are prohibited from occupancy and shall
4 be designed to automatically equalize hydrostatic flood forces on exterior walls by allowing for the entry
5 and exit of floodwaters. Designs for meeting this requirement must either be certified by a registered
6 professional engineer or architect licensed in the State of Washington or must meet or exceed the
7 following minimum criteria:

8 (i) A minimum of 2 openings having a total net area of not less than 1 square inch for every
9 square foot of enclosed area subject to flooding shall be provided.

10 (ii) The bottom of all openings shall be no higher than 1 foot above finished grade.

11 (iii) Openings may be equipped with screens, louvers, or other coverings or devices;
12 provided, that they permit the automatic entry and exit of floodwaters.

13 (2) All new or substantially improved manufactured homes to be placed or substantially improved
14 within flood hazard zones where base flood elevation data is provided shall be elevated on a permanent
15 foundation such that finished floor elevation of the lowest floor of the manufactured home is 1 foot or
16 more above the base flood elevation and be securely anchored to an adequately anchored foundation
17 system in accordance with the provisions of SCC 14.34.150(1)(b).

18 (3) Nonresidential Construction.

19 (a) New construction and substantial improvements of any commercial, industrial or other
20 nonresidential use structure shall either have the finished floor elevation of the lowest floor elevated 1
21 foot or more above the base flood elevation or, together with attendant utility and sanitary facilities, shall:

22 (i) Be floodproofed so that below 1 foot above the base flood elevation the structure is
23 watertight with walls substantially impermeable to the passage of water.

24 (ii) Have structural components capable of resisting hydrostatic and hydrodynamic loads
25 and effects of buoyancy.

26 (iii) Be certified by a registered professional engineer or architect licensed in the State of
27 Washington that the design and methods of construction are in accordance with accepted standards of
28 practice for meeting provisions of this Subsection based on their development and/or review of the
29 structural design, specifications and plans. Such certifications shall be provided to the official as set forth
30 in SCC 14.34.140.

31 (iv) Nonresidential use structures that are elevated, not floodproofed, must meet the
32 standards for space below the lowest floor as set forth in Subsection (1) of this Section.

33 (v) Applicants floodproofing nonresidential use buildings shall be notified that flood
34 insurance premiums will be based on rates that are 1 foot below the floodproofed level (e.g., a building
35 constructed to the base flood level will be rated as 1 foot below that level).

36 (4) Wet Floodproofing Standards for Agricultural and Utility Use Structures.

37 (a) New construction or substantial improvements of any agricultural building, as defined in
38 Chapter 14.04 SCC (Definitions), or utility use structure, when not meeting floodproofing or elevation
39 requirements of Subsection (3) of this Section shall:

40 (i) Not be used for human habitation.

41 (ii) Be anchored to prevent flotation, collapse or lateral movement.

42 (iii) Use flood-resistant materials below the BFE.

43 (iv) Be limited to parking and limited storage.

44 (v) Have a low potential for structural damage from inundation, scouring, velocities or
45 debris impact.

46 (vi) Be designed and oriented to automatically allow the free passage of floodwater through
47 the structure in a manner affording minimum damage to the structure or its contents.

48 (vii) All electrical and mechanical equipment permanently affixed to the structure is
49 elevated 1 foot above base flood elevation; or be made waterproof by accepted systems to the appropriate
50 code.

1 (viii) When valuation of the structure exceeds \$50,000, the provisions in Subsections
2 (4)(a)(i), (ii) and (iii) of this Section shall be verified by a currently registered professional engineer or
3 architect licensed in the State of Washington. The valuation used shall be that currently used by the
4 Administrative Official for determining building permit fees.

5 (5) Critical facilities should be afforded additional flood protection due to their nature. Construction
6 of new critical facilities should be, to the extent possible, located outside the limits of the 100-year
7 floodplain as identified on the County's FIRM. Construction of new critical facilities may be permissible
8 within the 100-year frequency floodplain if no feasible alternative site is available. When allowed, critical
9 facilities constructed within the 100-year frequency floodplain shall have the lowest floor elevated to 3 or
10 more feet above the level of the 100-year frequency flood. Floodproofing and sealing measures shall be
11 taken to ensure that toxic substances will not be displaced by or released into floodwaters. Access routes
12 elevated to or above the level of the 100-year frequency flood shall be provided to all critical facilities to
13 the extent possible. (Ord. O20070002 (part): Ord. 17938 Attch. F (part), 2000. Formerly 14.34.170)

14 **14.34.170 Standards for construction in shallow flooding areas (AO Zones).**

15 Shallow flooding zones (AO Zones) appear on the Flood Insurance Rate Maps with flood depth
16 designations from 1 to 3 feet above ground and in some areas with water velocities indicated. In these
17 areas, the following provisions apply:

18 (1) New construction and substantial improvements of residential structures within AO Zones shall
19 have the lowest floor elevated above the highest adjacent grade of the building site, and at least 1 foot or
20 more above the flood depth number specified on the Flood Insurance Rate Map (FIRM).

21 (2) Where velocities of 5 feet per second or greater are listed in an AO Zone, new structures within
22 500 feet of the outside toe of any dike shall be constructed to the following standards in addition to those
23 listed in Subsection (1) of this Section:

24 (a) All buildings or structures shall be elevated so that the lowest horizontal supporting
25 members are located no lower than 1 foot or more above the base flood elevation level. All space below
26 such supporting members shall remain open so as not to impede the flow of water. Exception: breakaway
27 walls provided for in Subsection (2)(e) of this Section may be used.

28 (b) All buildings or structures shall be securely anchored on pilings or columns.

29 (c) Pilings or columns used as structural support shall be designed and anchored so as to
30 withstand all applied loads of the base flood flow.

31 (d) Structural fill shall be allowed below the level of the existing grade only and shall be
32 designed by and installed under the direction of a registered professional engineer or architect licensed in
33 the State of Washington.

34 (e) Breakaway walls shall be allowed below the base flood elevation.

35 (f) Compliance with the provisions of Subsections (2)(c) and (e) of this Section shall be
36 certified by a registered professional engineer or architect.

37 (3) Where velocities of 5 feet per second or greater are listed in an AO Zone, new structures less
38 than 500 feet from the outside toe of any dike shall not be constructed with a crawl space below the BFE
39 unless it can be shown through engineering analysis that the structural components are capable of
40 resisting the effects of buoyancy as well as hydrostatic and hydrodynamic loads.

41 (4) New construction and substantial improvements of nonresidential (commercial and industrial)
42 structures within AO Zones shall:

43 (a) Have the lowest floor elevated above the highest adjacent grade of the building site, and at
44 least 1 foot or more above the depth number specified on the FIRM; or

45 (b) Together with attendant utility and sanitary facilities be completely floodproofed to 1 foot or
46 more above the base flood elevation; any space below that level is watertight with walls substantially
47 impermeable to the passage of water; structural components shall have the capability of resisting
48 hydrostatic and hydrodynamic loads and the effects of buoyancy. If this method is used, compliance shall
49 be certified by a registered professional engineer or architect.

1 (5) If located in an AO Zone with water velocities of 5 feet per second or greater, or within 200 feet
2 from the outside toe of a dike, nonresidential buildings shall be constructed to the standards of
3 Subsections (2)(a) through (f) of this Section.

4 (6) Require adequate drainage paths around structures on slopes to guide floodwater around and
5 away from proposed structures. (Ord. O20070002 (part): Ord. 17938 Attch. F (part), 2000. Formerly
6 14.34.180)

7 **14.34.180 Standards for construction in special flood risk zones.**

8 The following construction standards are required in special flood risk zones as defined in Chapter
9 14.04 SCC:

10 (1) New construction and substantial improvements of residential and nonresidential structures
11 within special flood risk zones shall have the lowest horizontal supporting member elevated 1 foot or
12 more above the base flood elevation and shall be constructed according to the standards provided in SCC
13 14.34.170(2)(a) through (f).

14 (2) Regardless of method of construction, critical facilities are prohibited in the special flood risk
15 zones.

16 (3) There shall be no fill or new construction within the channel of Gages Slough. (Ord. O20070002
17 (part): Ord. 17938 Attch. F (part), 2000. Formerly 14.34.190)

18 **14.34.190 Standards for development activities in floodways.**

19 Located within areas of special flood hazard established in SCC 14.34.050 are areas designated as
20 floodways. Since the floodway is an extremely hazardous area due to the velocity of floodwater that
21 carries debris, potential projectiles, and erosion potential, the following provisions apply:

22 (1) Prohibit encroachments including fill, new construction, substantial improvements, and other
23 development, unless certification by a registered professional engineer licensed in the State of
24 Washington is provided demonstrating, through hydrologic and hydraulic analyses performed in
25 accordance with standard engineering practice as well as the “Procedures for No-Rise Certification” as
26 published by FEMA, that the proposed encroachment would not result in any increase in flood levels
27 during the occurrence of the base flood discharge. Additionally, Skagit County reserves the right to have
28 this analysis reviewed by a qualified third party to be selected by the County. The cost of such review, if
29 any, shall be the responsibility of the applicant.

30 (2) Prohibit construction or reconstruction, repair or replacement of residential structures except for:

31 (a) Repairs, reconstruction, or improvements to a structure which do not increase the ground
32 floor area provided the cost of such reconstruction, repair, or improvement shall be calculated
33 cumulatively with any other activity occurring during the previous 10 years and the total of all
34 improvements or repairs shall not exceed 50% of the market value of the structure as established in the
35 first year of the 10-year period.

36 (b) Repair of a structure subsequent to sustaining damage of any origin when the cost of
37 restoring the structure to its pre-damaged condition as calculated cumulatively with any other activity
38 occurring during the previous 10 years and the total of all improvements or repairs shall not exceed 50%
39 of the market value of the structure as established in the first year of the 10-year period and prior to the
40 damage.

41 (i) Work done on structures to comply with existing health, sanitary, or safety codes when
42 determined by the Administrative Official, or to structures identified as historic places, may be excluded
43 in the 50% determination.

44 (c) Repairs, reconstruction, replacement, or improvements to existing farmhouse structures
45 located in designated floodways and which are located on lands designated as agricultural lands of long-
46 term commercial significance under RCW 36.70A.170 shall be permitted subject to the following. For the
47 purposes of this Section, “farmhouse” means a single-family dwelling located on a farm site where

1 resulting agricultural products are not produced for the primary consumption or use by the occupants and
2 the farm owner.

3 (i) The new farmhouse is a replacement for an existing farmhouse on the same farm site;

4 (ii) There is no potential building site for a replacement farmhouse on the same farm
5 outside the designated floodway;

6 (iii) Repairs, reconstruction, or improvements for a farmhouse shall not increase the total
7 square footage of encroachment of the existing farmhouse;

8 (iv) A replacement farmhouse shall not exceed the total square footage of the encroachment
9 of the structure it is replacing;

10 (v) A farmhouse being replaced shall be removed, in its entirety, including foundation, from
11 the floodway within 90 days after occupancy of a new farmhouse;

12 (vi) For substantial improvements, and replacement farmhouses, the elevation of the lowest
13 floor of the improvement and farmhouse respectively, including basement, is 1 foot higher than the base
14 flood elevation;

15 (vii) New and replacement water supply systems are designed to eliminate or minimize
16 infiltration of floodwaters into the system;

17 (viii) New and replacement sanitary sewerage systems are designed and located to eliminate
18 or minimize infiltration of floodwater into the system and discharge from the system into the floodwaters;
19 and

20 (ix) All other utilities and connections to public utilities are designed, constructed, and
21 located to eliminate or minimize flood damage.

22 (3) For all other residential structures located in a designated floodway and damaged by flooding or
23 flood-related erosion, the Department of Ecology is authorized to assess the risk of harm to life and
24 property posed by the specific conditions of the floodway and, based upon scientific analysis of depth,
25 velocity, and flood-related erosion, may exercise best professional judgment in recommending to the
26 Skagit County Building Official, repair, replacement, or relocation of such damaged structures. The effect
27 of the Department's recommendation to allow repair or replacement of a flood-damaged residence within
28 the designated floodway is a waiver of the floodway prohibition.

29 (4) Recreational vehicles placed in the floodway shall meet the following requirements.

30 (a) Be fully licensed and ready for highway use without the requirement for special highway
31 permits, be towable by a regular duty truck without the requirement for special licenses, be on its wheels
32 or jacking system, and have no permanently attached additions.

33 (b) Shall not be placed in the floodway from November through April of any calendar year.

34 (i) Exception. Recreational vehicles are allowed to be placed for weekend and holiday
35 use for a period not to exceed 14 days.

36 (45) All new construction and substantial improvements shall comply with all applicable flood
37 hazard reduction provisions of SCC 14.34.150 through 14.34.200. (Ord. O20090011 Attch. 2 (part); Ord.
38 O20070002 (part); Ord. O20020010 (part); Ord. O20020003 (part); Ord. 17938 Attch. F (part), 2000.
39 Formerly 14.34.200)

40 **14.34.200 Encroachment standards for development activities in areas where no floodway is** 41 **established.**

42 In areas where a regulatory floodway has not been designated, the cumulative effect of any proposed
43 development, where combined with all other existing and anticipated development, shall not increase the
44 water surface elevation of the base flood more than 1 foot at any point. (Ord. O20070002 (part); Ord.
45 O20020010 (part); Ord. O20020003 (part); Ord. 17938 Attch. F (part), 2000. Formerly 14.34.210)

1 **14.34.210 Standards for construction in coastal high hazard areas.**

2 Coastal high hazard areas (V Zones) are located within the areas of special flood hazard established in
3 SCC 14.34.050. Coastal high hazard areas (V Zones) have special flood hazards associated with high
4 velocity waters and tidal surges, and, therefore, the following provisions shall apply in these areas:

5 (1) All new construction and substantial improvements in Zones V1-V4 shall be elevated on pilings
6 and columns so that:

7 (a) The bottom of the lowest horizontal structural member of the lowest floor (excluding the
8 pilings or columns) is elevated 1 foot or more above the base flood level; and

9 (b) The pile or column foundation and structure attached thereto is anchored to resist flotation,
10 collapse and lateral movement due to the effects of wind and water loads acting simultaneously on all
11 building components. Wind and water loading values shall each have a 1% chance of being equaled or
12 exceeded in any given year (100-year mean recurrence interval); a registered professional engineer or
13 architect shall develop or review the structural design in accordance with the most recent edition of the
14 Coastal Construction Manual as published by FEMA, specifications and plans for the construction and
15 shall certify that the design and methods of construction to be used are in accordance with accepted
16 standards of practice for meeting the provisions of Subsection (1)(a) of this Section. Skagit County
17 reserves the right to have this analysis reviewed by a qualified third party to be selected by the County.
18 The cost of such review, if any, shall be the responsibility of the applicant.

19 (2) Obtain the elevation in relation to NGVD '29 of the bottom of the lowest horizontal structural
20 member of the lowest floor of all new and substantially improved structures in Zones V1-V4 and whether
21 or not such structures contain a basement. The local administrator shall maintain a record of all such
22 information.

23 (3) All new construction shall be located landward of the reach of extreme high tide.

24 (4) Provide that all new construction and substantial improvements have the space below the lowest
25 floor either free of obstruction or constructed with ~~nonsupporting~~[non-supporting](#) breakaway walls, open
26 wood lattice work, or insect screening intended to collapse under wind and water loads without causing
27 collapse, displacement, or other structural damage to the elevated portion of the building or supporting
28 foundation system. For the purpose of this Section, a breakaway wall shall have a design safe loading
29 resistance of not less than 10 and no more than 20 pounds per square foot. Use of breakaway walls which
30 exceed a design safe loading resistance of 20 pounds per square foot, either by design or when so required
31 by local or State codes, may be permitted only if a registered professional engineer or architect licensed in
32 the State of Washington certifies that the designs proposed meet the following conditions:

33 (a) Breakaway wall collapse shall result from a water load less than that which would occur
34 during the base flood; and

35 (b) The elevated portion of the building and supporting foundation system shall not be subject
36 to collapse, displacement, or other structural damage due to the effects of wind and water loads acting
37 simultaneously on all building components (structural and nonstructural). Maximum wind and water
38 loading values to be used in this determination shall each have a 1% chance of being equaled or exceeded
39 in any given year (100-year mean recurrence interval).

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

42 (6) Prohibit the use of fill for structural support of the building.

43 (7) Prohibit manmade alterations to the natural landscape, which would increase potential flood
44 damage. (Ord. O20070002 (part); Ord. 17938 Attch. F (part), 2000. Formerly 14.34.220).

45
46 ~~14.34.220~~ [14.34.220 Habitat protection standards.](#)

47 [\(1\) Habitat Impact Assessment. Unless exempted pursuant to subsection \(2\) of this Section, a](#)
48 [floodplain development permit application shall include an assessment of the impact of the project on](#)
49 [water quality and aquatic and riparian habitat of salmon and orca species protected under the Endangered](#)
50 [Species Act. The process for meeting this assessment requirement is as follows:](#)

1 (a) If the proposed development is within the Protected Review Area, as defined in SCC
2 14.34.055, a Fish and Wildlife Habitat Conservation Area (FWHCA) Site Assessment will be required
3 pursuant to SCC 14.24.520. If the proposed development is not within the Protected Review Area, but
4 within the SFHA, the applicant shall submit a SFHA Habitat Impact Assessment checklist to determine
5 whether a FWHCA Site Assessment pursuant to SCC 14.24.520 is required. This checklist will evaluate
6 habitat functions and values present on-site and the potential impacts to these functions and values based
7 on the project description. Department staff will determine whether a FWHCA site assessment is
8 necessary based on review of a completed checklist.

9 (b) In lieu of a FWHCA Site Assessment or SFHA Habitat Impact Assessment checklist pursuant
10 to subsection (a) above, the applicant may comply with the Habitat Impact Assessment requirements of
11 this section by providing one of the following:

12 (i) A biological evaluation or assessment covering protected salmon and orca species
13 that has been approved by the US Fish and Wildlife Service or the National Marine Fisheries
14 Service.

15 (ii) Documentation that the appropriate State or Federal agency has determined that the
16 activity fits within a Habitat Conservation Plan covering protected salmon and orca species
17 approved pursuant to Section 10 of the Endangered Species Act (ESA).

18 (iii) Documentation that the appropriate State or Federal agency has determined that the
19 activity fits within Section 4(d) of the ESA relating to protected salmon and orca species.

20 (2) Exemptions from Habitat Impact Assessments. The following activities are exempt from the
21 requirement to provide a Habitat Impact Assessment or Habitat Mitigation Plan; however, an exemption
22 from the assessment requirements of this chapter does not exempt an applicant from complying with the
23 provisions of SCC 14.24, Critical Areas Ordinance.

24 (a) Repairs or remodeling of an existing structure, provided that the repairs or remodeling are not
25 a substantial improvement or a repair of substantial damage.

26 (b) Expansion of an existing structure that is no greater than 10% beyond its existing footprint,
27 provided that the repairs or remodeling are not a substantial improvement or a repair of substantial
28 damage. This measurement is counted cumulatively from the effective date of this ordinance.

29 (c) Activities with the sole purpose of creating, restoring or enhancing natural functions
30 associated with floodplains, streams, lakes, estuaries, marine areas, habitat, and riparian areas that meet
31 Federal and State standards, provided the activities do not include structures, grading, fill, or impervious
32 surfaces.

33 (d) Development of open space and recreational facilities, such as parks and trails, that do not
34 include structures, grading, fill, impervious surfaces or removal of more than 5% of the native vegetation
35 on that portion of the property in the regulatory floodplain.

36 (3) Habitat Mitigation Plan. If the assessment conducted under sub-section (1) of this section
37 concludes that the project is expected to have an adverse effect on water quality and/or aquatic or riparian
38 habitat or habitat functions associated with species protected under the Endangered Species Act, the
39 applicant shall provide a plan to mitigate those impacts, in accordance with SCC 14.24, the Critical Areas
40 Ordinance.

41 (4) Final approval of the project or occupancy approval shall not be provided until all work identified
42 in the evaluation, assessment, or mitigation plan has been completed and implemented or the applicant
43 has provided the necessary assurance that any unfinished portions of the project will be completed.

44 ~~14.34.220~~ **14.34.230 Critter pads.**

45 For the purposes of providing livestock flood sanctuary areas, critter pads shall be permitted in any
46 special flood hazard area except when located within the regulatory floodway. Construction of such pads
47 shall be as specified in Appendix A of this Chapter. (Ord. O20070002 (part): Ord. 17938 Attch. F (part),
48 2000. Formerly 14.34.150)

1 **APPENDIX A**

2 **Chapter 14.34 SCC Construction Specifications for Critter Pads (Livestock Flood Sanctuary Areas)**

3 **SITE SELECTION**

4 (1) Property shall be located in the 100-year floodplain and conveniently located within an
5 established farmland that contains domestic livestock.

6 (2) Portions of the property used as livestock pasture must be located in the 100-year floodplain as
7 identified on the official Flood Insurance Rate Map (FIRM) for Skagit County. Construction is not
8 permitted in the regulatory floodway.

9 (3) The cumulative impacts of all proposed critter pads in a flood basin are exempt from compliance
10 with the encroachment standards of SCC 14.34.200.

11 (4) No portion of the pad shall be allowed within 100 feet of the top of a riverbank or within a
12 wetland area as defined by Chapter 14.24 SCC. Less than a 100-foot setback may be allowed if mitigation
13 is performed which provides an equivalent or greater vegetative buffer along the river or stream corridor.

14 (5) The pad shall be located on the property away from areas of high velocity flows so as to
15 minimize impacts to the site, upstream and downstream properties, and natural resources.

16 (6) No pad shall be located nearer than half the height of the pad (H/2) to any property line. No
17 portion of the pad shall abut any property line. Setback distances from all property lines shall be measured
18 at right angles from the property line to the toe of the pad.

19 **SITE PREPARATION**

20 (1) Erosion control shall be established around the perimeter of the work site per Chapter 14.32
21 SCC.

22 (2) The foundation area of the pad shall be stripped of existing surface vegetation to a minimum
23 depth of 4 inches and stockpiled on site. If this material is to be stockpiled for more than 24 hours, it shall
24 be covered or stabilized using erosion control methods. This material shall be replaced on the surface of
25 the pad when revegetated and reseeded.

26 **SOIL MATERIAL FOR PAD**

27 (1) Soil may be extracted from nonsensitive areas on site; it shall not be taken from wetlands or
28 other sensitive areas other than frequently flooded areas.

29 (2) Detrimental amounts of organic material shall not be permitted in fills. Imported fill material
30 shall be obtained from an approved or permitted site.

31 **PLACEMENT OF FILL**

32 (1) The maximum soil layer thickness (lift) prior to compaction shall not exceed 2 feet.

33 (2) Compaction may be performed by the routing back and forth of construction equipment.

34 **PAD SURFACING**

35 (1) Disturbed areas of soil on the upper surface of the pad shall be reseeded with a mixture of
36 perennial ryegrass and creeping fescue or other plant material.

37 (2) Side slopes shall be no steeper than 2 horizontal to 1 vertical (2:1).

38 (3) Side slopes shall be protected by placing erosion control fabric, reseeded, and planting native
39 woody vegetation in accordance with biotechnical bank stabilization techniques described in the
40 construction specifications.

41 (4) Newly planted vegetation used for side slope stabilization may require temporary fencing along
42 the length of the toe of the slope until such time as the vegetation has established itself.

43 (5) The surface of the pad shall be compacted soil and low grasses. A straw covering shall be spread
44 over the surface prior to intended use. The straw and manure collected on the surface during the
45 emergency use shall be removed and treated as animal waste following the flood event.

46 (6) Ramp slopes shall be no steeper than 8 horizontal to 1 vertical (8:1).

47 (7) The ramp may be constructed of concrete, wood or earth material. The upper surface of the pad
48 area shall be enclosed by a fence.

49 **SIZE LIMITATIONS**

50 (1) The maximum size of the pad shall not exceed 50 square feet per animal unit (1,000 lb.) plus the
51 area created by adding 14 feet of width along 2 sides to be used for farm vehicle access.

1 (2) The width of the pad as measured perpendicular to the flooding source (river, stream or lake)
2 shall not exceed 15% of the total floodplain width of the property.

3 **AGREEMENTS**

4 (1) Any application for the construction of a critter pad shall include written legal agreements
5 between Skagit County and the applicant that provides for the following:

6 (a) Construction and maintenance of the pad shall be performed according to best management
7 practices.

8 (b) Applicants accept the flood impacts and new delineation of floodway/floodplain that may
9 occur as a result of construction of such pad.

10 (c) The construction of buildings or structures on the pad for use other than livestock shelter is
11 prohibited. Livestock shelters shall be permitted only through the Planning and Development Services
12 permit process.

13 (2) When agricultural land containing critter pads is to be converted to any non-AG use, the County
14 shall require that all critter pads be removed. As a condition of a land use conversion from agriculture use,
15 all critter pad material shall be removed and the pad area restored to its previous ground level. An
16 inspection and sign-off by a County Building Official shall be required before any building permits are
17 issued for the portion of the property that formerly contained the critter pad.

18 **PERMIT APPLICATION**

19 In addition to the Planning and Development Services special flood hazard area development permit
20 application, any applicant proposing the construction of a critter pad shall also provide the following
21 information:

22 (1) Site plan indicating the location of property lines, total square foot area of existing buildings,
23 total square foot area of land within property lines, proposed square foot area of the pad, proposed
24 location of the pad in reference to property lines, identified sensitive areas (critical areas) and any ground
25 elevation reference marks.

26 (2) Description or type of farming activity. Number and type of livestock.

27 (3) Identify amount, type and source of fill material to be used and whether it is obtained on or off
28 site.

29 (4) Construction schedule and methods including erosion control methods to be used during
30 construction.

31 (5) Completed design specifications per this Chapter.

32 (6) Any signed legal agreements required per this Chapter.

33 **APPROVAL TO START CONSTRUCTION**

34 (1) The construction of any critter pad shall not commence until such time as the Administrative
35 Official finds that the work described in an application for a permit and the plans, specifications and other
36 data filed therewith conform to the requirements of this Chapter and other pertinent laws and ordinances
37 and that the fees required for the permit have been paid.

38 (2) The Administrative Official shall inspect construction for which a permit is issued. The person
39 causing the work to be done shall notify the Administrative Official in writing or by telephone when such
40 permitted work is ready for inspection. It shall be the duty of the permit applicant to cause the work to
41 remain accessible and exposed for inspection.

42 **INSPECTIONS REQUIRED**

43 (1) After removal of the topsoil and prior to fill material being placed.

44 (2) During or after the placement of erosion control devices.

45 (3) After final completion and prior to using.

46 **DESIGN SPECIFICATIONS**

47 The following information is intended to assist the designer with meeting the dimensional
48 requirements for the construction of a critter pad:

49 (1) Height (h): Base flood elevation is considered minimum height. Recommended height is 1 foot
50 above base flood elevation.

- 1 (2) Net Area (A_n): The net area (A_n) is a product of the width perpendicular to flood flow (W_p) and
2 the length parallel to the flood flow (L_p). The net area should be no greater than 50 square feet per animal
3 unit (1,000 lb.). An additional area no greater than 25% of the calculated area will be allowed in order to
4 accommodate herd growth.
- 5 (3) Gross Area (A_g): The gross area is the product of ($W_p + 14'$) and ($L_p + 14'$). A strip no greater
6 than 14 feet wide will be permitted along 1 length and 1 width in order to provide vehicle access.
- 7 (4) Side Slopes (Z): Side slopes for fill should be 2:1 or greater.
- 8 (5) Base Area (A_b): The base area is the product of the base width (W_b) and base length (L_b) or the
9 total footprint of the pad at grade. This area should equal the sum of the gross area (A_g) plus the
10 horizontal area of the side slopes and should not exceed 2% of the total area (A_t).
- 11 (6) Floodplain width covered by pad (FW_p): The width of floodplain covered by the pad should be
12 less than 15% of the total floodplain width (FW_t) of the property.
- 13 (7) Ramp Length (R_l): The ramp length should not exceed 500 feet and should have a minimum
14 slope of 8:1. If the ramp is constructed on fill, it should run parallel to flood flow. If the ramp is built
15 using piling construction, it may be built either parallel or perpendicular to flow.
- 16 (8) Ramp Width (RW): The width of the ramp should be no greater than 18 feet.
- 17 (9) Total Area (A_t): The total area is the area that is occupied by all structures or improvements
18 (including pad) on the entire property. The total area shall not exceed 5% of the area of the property.
- 19 (10) Distance (D): The shortest distance from the base of the pad to an adjacent river, stream, lake
20 or property line.
21 (Ord. O20070009 (part); Ord. O20070002 (part))
22