



TO: City of South Bend Planning Commission
RE: Flood Damage Prevention Code Amendments

Background

The National Flood Insurance Program (NFIP), managed by the Federal Emergency Management Agency (FEMA), enables homeowners, business owners and renters in participating communities to purchase federally backed flood insurance. This insurance offers an insurance alternative to disaster assistance to meet the escalating costs of repairing flood damage to buildings and their contents.

Participating communities agree to adopt and enforce floodplain management ordinances to reduce future flood damage. The City of South Bend's ordinance, Flood Damage Prevention, is in Chapter 14.10 SBMC. The map in Attachment 1 shows the areas affected by the ordinance.

While the NFIP is a federal program, the Washington State Department of Ecology assists FEMA by evaluating community floodplain management programs, reviewing local floodplain ordinances, and participating in statewide flood hazard mitigation planning.

Ecology recently conducted a Community Assistance Visit (CAV) of the city's flood plain management program to ensure its continued compliance with federal regulations for the NFIP.

Ecology's review of Chapter 14.10 SBMC revealed the need to amend the current code to stay current with NFIP regulations and state recommendations. The changes to Chapter 14.10 SBMC show up as track changes in Attachment 2 to this staff report. Staff deem these changes as minor and will not significantly change implementation of the program within the city.

The draft amendments have been submitted to the Department of Commerce for its 60-day review before state agencies. The city has asked for expedited review of the amendments. The city conducted environmental review under SEPA, issuing a Determination of Nonsignificance (DNS) on May 20, 2022. The comment period on the DNS ends June 7, 2022.

Actions Steps for Passing Amendments to the Flood Damage Prevention Code

The process begins with the Planning Commission holding a public hearing scheduled for June 7, 2022. The city has advertised the public hearing in the May 25, 2022 edition of the Willapa Harbor Herald and on the Planning Commission page on the city's website.

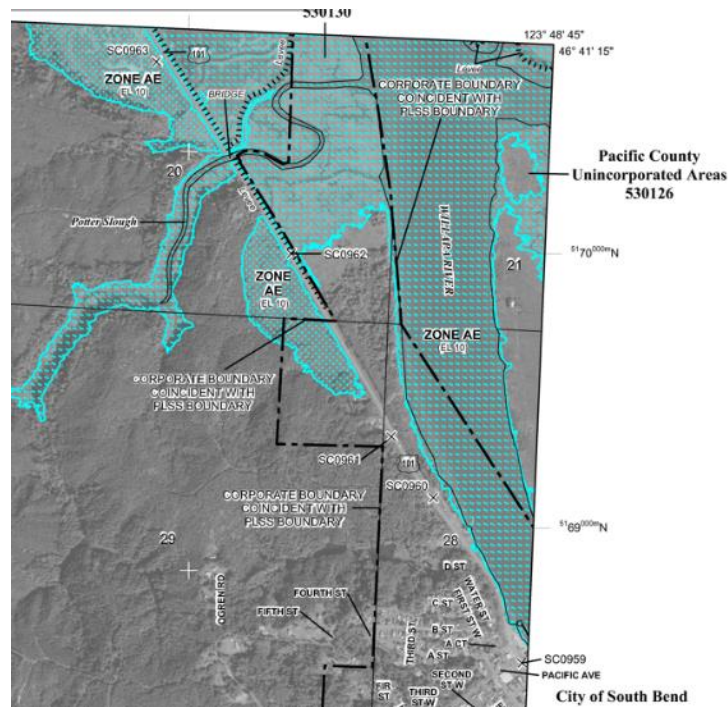
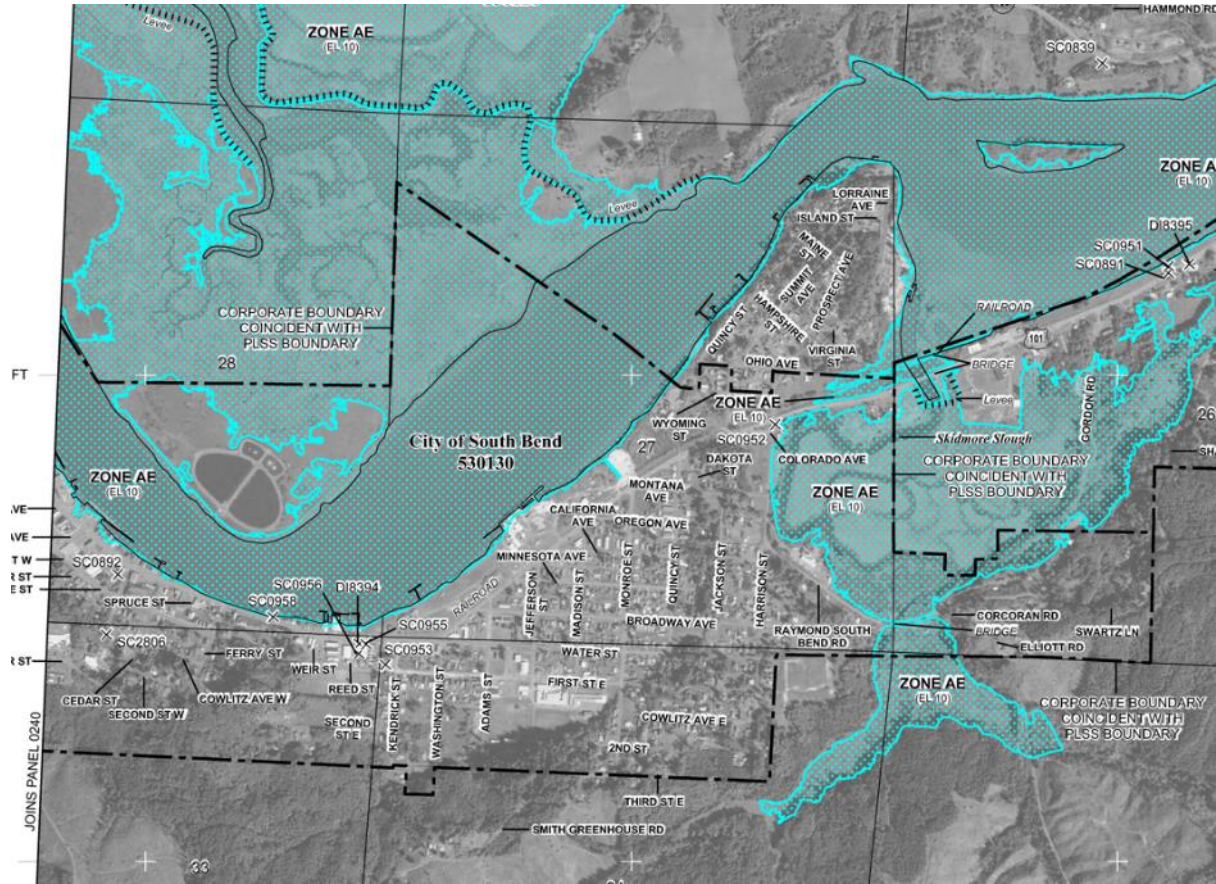
After taking public testimony at the hearing, the Planning Commission will consider any comment on the code amendments, deliberate on its merits, and make a recommendation to the City Council.

The City Council will consider the Planning Commission recommendation at a following meeting. The City Council must then wait for any comments compiled during the state agency review period.

The City Council will then ask the staff to prepare an ordinance adopting the code amendments. Once the City Council receives the ordinance, it will introduce the ordinance (first reading) and then consider it at the following meeting.

Upon passage of the ordinance, the city must file a copy of it with the Department of Commerce Growth Management Division.

Attachment 1: Flood Insurance Map for South Bend



Attachment 2

14.10.010 Statutory authorization.

The Legislature of the State of Washington has delegated the responsibility to local governmental units to adopt regulations designed to promote the public health, safety, and general welfare of its citizenry. (Ord. 1167 § 1.1, 1991).

14.10.020 Findings.

A. The flood hazard areas of South Bend 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.

B. These flood losses are caused by the cumulative effect of obstructions in areas of special flood hazards which increase flood heights and velocities, and, when inadequately anchored, damage uses in other areas. Uses that are inadequately floodproofed, elevated, or otherwise protected from damage also contribute to the flood loss. (Ord. 1167 § 1.2, 1991).

14.10.030 Purpose.

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

- A. Protect human life and health;
- B. Minimize expenditure of public money and costly flood control projects;
- 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 damage to public facilities and utilities such as water and gas mains, electric, telephone and sewer lines, streets, and bridges located in areas of special flood hazard;
- F. Help maintain a stable tax base by providing for the sound use and development of areas of special food hazard so as to minimize future flood blight areas;
- G. Ensure that potential buyers are notified that property is in an area of special flood hazard; and
- H. Ensure that those who occupy the areas of special flood hazard assume responsibility for their actions. (Ord. 1167 § 1.3, 1991).

14.10.040 Methods of reducing flood losses.

In order to accomplish its purposes, this chapter includes methods and provisions for:

- A. Restricting or prohibiting uses which are dangerous to health, safety and property due to water or erosion hazards, or which result in damaging increases in erosion or in flood heights or velocities;

B. Requiring that uses vulnerable to floods, including facilities which serve such uses, be protected against flood damage at the time of initial construction;

C. Controlling the alteration of natural floodplains, stream channels, and natural protective barriers, which help accommodate or channel floodwaters;

D. Controlling, filling, grading, and other development which may increase flood damage; and

E. Preventing or regulating the construction of flood barriers which will unnaturally divert floodwaters or which may increase flood hazards in other areas. (Ord. 1167 § 1.4, 1991).

14.10.050 Definitions.

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

A. “Alteration of watercourse” means any action that will change the location of the channel occupied by water within the banks of any portion of a riverine waterbody.

AB. “Appeal” means a request for a review of the city supervisor’s interpretation of any provision of this chapter or a request for a variance.

BC. “Area of shallow flooding” means a designated AO or AH zone on the flood insurance rate map (FIRM). The base flood depths range from one to three feet, a clearly defined channel does not exist, the path of flooding is unpredictable and indeterminate, and velocity flow may be evident. AO is characterized as sheet flow and AH indicates ponding.

CD. “Area of special flood hazard” means the land in the floodplain within a community subject to a one percent or greater chance of flooding in any given year. It is shown on the Flood Insurance Rate Map (FIRM) as zone A, AO, AH, A1-30, AE, A99, AR (V, VO, V1-30, VE). “Special flood hazard area” is synonymous in meaning with the phrase “area of special flood hazard”. ~~Designation on maps always includes the letters A or V.~~

DE. “Base flood” means the flood having a one percent chance of being equaled or exceeded in any given year (also referred to as the “100-year flood”). Designated on FIRM maps by the letters A or V.

F. “Base Flood Elevation (BFE)” means the elevation to which floodwaters is anticipated to rise during the base flood.

EG. “Basement” means any area of the building having its floor subgrade (below ground level) on all sides.

FH. “Development” means any manmade change to improved or unimproved real estate, including but not limited to buildings or other structures, mining, dredging, filling, grading, paving, excavation or drilling operations or storage of equipment or materials located within the area of special flood hazard.

GI. “Flood” or “flooding” means a general or temporary condition of partial or complete inundation of normally dry land areas from:

1. The overflow of inland or tidal waters; and/or
2. The unusual or rapid accumulation of runoff or surface waters from any source.

3. Mudslides (i.e., mudflows) which are proximately caused by flooding as defined in paragraph (1)(b) of this definition and are akin to a river of liquid and flowing mud on the surfaces of normally dry land areas, as when earth is carried by a current of water and deposited along the path of the current.

4. The collapse or subsidence of land along the shore of a lake or other body of water as a result of erosion or undermining caused by waves or currents of water exceeding anticipated cyclical levels or suddenly caused by an unusually high water level in a natural body of water, accompanied by a severe storm, or by an unanticipated force of nature, such as flash flood or an abnormal tidal surge, or by some similarly unusual and unforeseeable event which results in flooding as defined in paragraph (1) of this definition.

J. “Flood Elevation Study” means an examination, evaluation and determination of flood hazards and, if appropriate, corresponding water surface elevations, or an examination, evaluation and determination of mudslide (i.e., mudflow) and/or flood-related erosion hazards. Also known as a Flood Insurance Study (FIS).

H.K. “Flood insurance rate map (FIRM)” means the official map on which the Federal Insurance Administration has delineated both the areas of special flood hazards and the risk premium zones applicable to the community. A FIRM that has been made available digitally is called a Digital Flood Insurance Rate Map (DFIRM).

L. “Flood insurance study” means the official report provided by the Flood Insurance Administration that includes flood profiles, the flood insurance rate maps, and the water surface elevation of the base flood.

M. “Floodplain administrator” means the community official designated by title to administer and enforce the floodplain management regulations.

N. “Flood proofing” means any combination of structural and nonstructural additions, changes, or adjustments to structures which reduce or eliminate risk of flood damage to real estate or improved real property, water and sanitary facilities, structures, and their contents. Flood proofed structures are those that have the structural integrity and design to be impervious to floodwater below the Base Flood Elevation.

JO. “Floodway” means the channel of a river or other watercourse and the adjacent land areas that must be reserved in order to discharge the base flood without cumulatively increasing the water surface elevation more than one foot. Also referred to as "Regulatory Floodway."

P. “Functionally dependent use” means a use which cannot perform its intended purpose unless it is located or carried out in close proximity to water. The term includes only docking facilities, port facilities that are necessary for the loading and unloading of cargo or passengers, and ship building and ship repair facilities, and does not include long term storage or related manufacturing facilities.

Q. “Highest adjacent grade” means the highest natural elevation of the ground surface prior to construction next to the proposed walls of a structure.

R. “Historic structure” means any structure that is:

1. Listed individually in the National Register of Historic Places (a listing maintained by the Department of Interior) or preliminarily determined by the Secretary of the Interior as meeting the requirements for individual listing on the National Register;

1.
2. Certified or preliminarily determined by the Secretary of the Interior as contributing to the historical significance of a registered historic district or a district preliminarily determined by the Secretary to qualify as a registered historic district;
3. Individually listed on a state inventory of historic places in states with historic preservation programs which have been approved by the Secretary of Interior; or
4. Individually listed on a local inventory of historic places in communities with historic preservation programs that have been certified either:
 - a. By an approved state program as determined by the Secretary of the Interior, or
 - b. Directly by the Secretary of the Interior in states without approved programs

~~KS.~~ “Lowest floor” means the lowest floor of the lowest enclosed area (including basement). An unfinished or flood resistant enclosure, usable solely for parking of vehicles, building access or storage, in an area other than a basement area, is not considered a building’s lowest floor; provided, that such enclosure is not built so as to render the structure in violation of the applicable nonelevation design requirements of this chapter found at SBMC 14.10.260(B).

~~LT.~~ “Manufactured home” means a structure, transportable in one or more sections, which is built on a permanent chassis and is designed for use with or without a permanent foundation when connected to the required utilities. For floodplain management purposes the term “manufactured home” also includes park trailers, travel trailers, and other similar vehicles placed on a site for greater than 180 consecutive days. For insurance purposes the term “manufactured home” does not include park trailers, travel trailers and other similar vehicles.

~~MU.~~ “Manufactured home park or subdivision” means a parcel (or contiguous parcels) of land divided into two or more manufactured home lots for rent or sale.

~~V.~~ “Mean sea level” means for purposes of the National Flood Insurance Program, the vertical datum to which Base Flood Elevations shown on a community's Flood Insurance Rate Map are referenced.

~~NW.~~ “New construction” means for the purposes of determining insurance rates, structures for which the “start of construction” commenced on or after the effective date of an initial Flood Insurance Rate Map or after December 31, 1974, whichever is later, and includes any subsequent improvements to such structures. For floodplain management purposes, “new construction” means structures for which the “start of construction” commenced on or after the effective date of a floodplain management regulation adopted by a community and includes any subsequent improvements to such structures.

~~structures for which the start of construction commenced on or after the effective date of the ordinance codified in this chapter.~~

~~EX.~~ “Recreational vehicle” means a vehicle:

1. Built on a single chassis;
2. Four hundred square feet or less when measured at the largest horizontal projection;
3. Designed to be self-propelled or permanently towable by a light duty truck; and

4. Designed primarily not for use as a permanent dwelling but as a temporary living quarters for recreational, camping, travel or seasonal use.

PY. “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 filing; nor does it include the installation of streets and/or walkways; nor does it include excavation for a basement, footings, piers, or foundation or the erection of temporary forms; nor does it include the installation on the property or accessory buildings, such as garages or sheds not occupied as dwelling units or not parts of the main structure. For a substantial improvement, the actual start of construction means the first alteration of any wall, ceiling, floor, or other structural part of a building, whether or not that alteration affects the external dimensions of the building.

QZ. “Structure” means a walled and roofed building including a gas or liquid storage tank that is principally above ground, as well as a manufactured home.

RAA. “Substantial damage” means damage of any origin sustained by a structure whereby the cost of restoring the structure to its before-damaged condition would equal or exceed 50 percent of the market value of the structure before the damage occurred.

SAB. “Substantial improvement” means any repair, reconstruction, or improvement of a structure, the cost of which equals or exceeds 50 percent of the market value of the structure either:

1. Before the improvement or repair is started; or
2. If the structure has been damaged and is being restored, before the damage occurred. For the purposes of this definition, a “substantial improvement” is considered to occur when the first alteration of any wall, ceiling, floor or other structural part of the building commences, whether or not that alteration affects the external dimensions of the structure.

The term “substantial improvement” does not, however, include either:

1. Any project for improvement of a structure to comply with existing state or local health, sanitary, or safety code specifications which are solely necessary to assure safe living conditions; or
2. Any alteration of a structure listed on the National Register of Historic Places or a State Inventory of Historic Places.

TAC. “Variance” means a grant of relief from the requirements of this chapter which permits construction in a manner that would otherwise be prohibited by this chapter. (Ord. 1496, 2015; Ord. 1167 § 2.0, 1991).

14.10.060 Lands to which this chapter applies.

This chapter shall apply to all areas of flood hazards within the jurisdiction of the city of South Bend. (Ord. 1167 § 3.1, 1991).

14.10.070 Basis for establishing areas of special flood hazard.

The areas of special flood hazard identified by the Department of Homeland Security’s Federal Emergency Management Agency (FEMA) in a scientific and engineering report entitled “Flood Insurance Study Pacific County, Washington and incorporated areas, dated May 18, 2015,” with accompanying flood insurance rate maps (FIRM), dated May 18, 2015, is adopted by reference and declared to be a part of this chapter. The flood insurance study (FIS) is on file at City Hall, 1102 W. First Street, South Bend, Washington. The best available information for flood hazard area identification as outlined in SBMC 14.10.160(B) shall be the basis for regulation until a new FIRM is issued that incorporates data utilized under SBMC 14.10.160(B). (Ord. 1496, 2015; Ord. 1167 § 3.2, 1991).

14.10.080 Penalties for noncompliance.

All development within special flood hazard areas is subject to the terms of this ordinance and other applicable regulations. No structure or land shall hereafter be constructed, located, extended, converted, or altered without full compliance with the terms of this chapter and other applicable regulations. Violation of the provisions of this chapter by failure to comply with any of its requirements (including violations of conditions and safeguards established in connection with conditions) shall constitute a misdemeanor. Any person who violates this chapter or fails to comply with any of its requirements shall upon conviction thereof be fined not more than \$500.00 or imprisoned for not more than 90 days, or both, for each violation, and in addition shall pay all costs and expenses involved in the case.

Nothing herein contained shall prevent the city of South Bend from taking such other lawful action as is necessary to prevent or remedy any violation. (Ord. 1167 § 3.3, 1991).

14.10.090 Injunctive and other proceedings.

Notwithstanding the imposition of any penalties hereunder, the city may institute any appropriate action or proceeding to require compliance with or to enjoin violation of the provisions of this chapter, or any administrative orders or determinations made pursuant to this chapter. (Ord. 1167 § 3.3-1, 1991).

14.10.100 Abrogation and greater restrictions.

This chapter is not intended to repeal, abrogate, or impair any existing easements, covenants, or deed restrictions. However, where this chapter and another ordinance, easement, covenant, or deed restriction conflict or overlap, whichever imposes the more stringent restrictions shall apply.

If any section, clause, sentence, or phrase of this chapter is held to be unconstitutional by any court of competent jurisdiction, then said holding shall in no way affect the validity of the remaining portions of this chapter. (Ord. 1496, 2015; Ord. 1167 § 3.4, 1991).

14.10.110 Interpretation.

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

- A. Considered as minimum requirements;
- B. Liberally construed in favor of the governing body; and
- C. Deemed neither to limit nor repeal any other powers granted under state statutes. (Ord. 1167 § 3.5, 1991).

14.10.120 Warning and disclaimer of liability.

The degree of flood protection required by this chapter 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 chapter does not imply that land outside the areas of special flood hazards or uses permitted within such areas will be free from flooding or flood damages. This chapter shall not create liability on the part of the city of South Bend, any officer or employee thereof, or the Federal Insurance Administration, for any flood damages that result from reliance on this chapter or any administrative decision lawfully made hereunder. (Ord. 1496, 2015; Ord. 1167 § 3.6, 1991).

14.10.130 Severability

This ordinance and the various parts thereof are hereby declared to be severable. Should any Section of this ordinance be declared by the courts to be unconstitutional or invalid, such decision shall not affect the validity of the ordinance as a whole, or any portion thereof other than the Section so declared to be unconstitutional or invalid.

14.10.130 140 Development permit – Required.

A development permit shall be obtained before construction or development begins within any area of special flood hazard established in SBMC 14.10.070. The permit shall be for all structures including manufactured homes, as defined in SBMC 14.10.050, and for all development including fill and other activities, also as set forth in SBMC 14.10.050. (Ord. 1167 § 4.1-1, 1991).

14.10.140 150 Development permit – Application.

Application for a development permit shall be made on forms furnished by the city supervisor and may include but not be limited to plans in duplicate drawn to scale showing the nature, location, dimensions, and elevations of the area in question, existing or proposed structures, fill, storage of materials, drainage facilities, and the location of the foregoing. Specifically, the following information is required:

- A. Elevation in relation to mean sea level of the lowest floor (including basement) of all structures;
- B. Elevation in relation to mean sea level to which any structure has been floodproofed;
- C. Certification by a registered professional engineer or architect that the floodproofing methods for any nonresidential structure meet the floodproofing criteria in SBMC 14.10.260; and
- D. Description of the extent to which a watercourse will be altered or relocated as a result of proposed development. (Ord. 1167 § 4.1-2, 1991).

E. Where development is proposed in a floodway, an engineering analysis indicating no rise of the Base Flood Elevation; and

F. Any other such information that may be reasonably required by the Floodplain Administrator in order to review the application.

14.10.~~150~~160 City supervisor – Administrative responsibility.

The city supervisor is appointed to administer and implement this chapter by granting or denying development permit applications in accordance with its provisions. The Floodplain Administrator may delegate authority to implement these provisions. (Ord. 1167 § 4.2, 1991).

14.10.~~160~~170 City supervisor – Duties.

Duties of the city supervisor shall include, but not be limited to:

A. Permit Review.

1. Review all development permits to determine that the permit requirements of this chapter have been satisfied;
2. Review all development permits to determine that all necessary permits have been obtained from those federal, state or local governmental agencies from which prior approval is required;
3. Review all development permits to determine if the proposed development is located in the floodway. If located in the floodway, assure that the encroachment provisions of SBMC 14.10.290 are met:-
4. The site is reasonably safe from flooding.
5. Notify FEMA when annexations occur in the Special Flood Hazard Area.

B. Use of Other Base Flood Data. When base flood elevation data has not been provided in accordance with SBMC 14.10.070, the city supervisor shall obtain, review and reasonably utilize any base flood elevation and floodway data available from a federal, state or other source in order to administer SBMC 14.10.250 through 14.10.290.

C. Information to be Obtained and Maintained.

1. Where base flood elevation data is provided through the flood insurance study or required as in subsection (B) of this section, obtain and record the actual (as-built) elevation (in relation to mean sea level) of the lowest floor, including basement, of all new or substantially improved structures, and whether or not the structure contains a basement.
2. For all new or substantially improved floodproofed nonresidential structures where base flood elevation data is provided through the FIS, FIRM, or as required in section 14.10.160(B):
 - a. Verify-Obtain and maintain a record the actual elevation (in relation to mean sea level); and
 - b. Maintain the floodproofing certifications required in SBMC 14.10.140(C).
3. Maintain for public inspection all records pertaining to the provisions of this chapter.
4. Certification required by section 14.10.290(A) (floodway encroachments).
5. Records of all variance actions, including justification for their issuance.

6. Improvement and damage calculations.

D. Alteration of Watercourses.

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

E. Interpretation of FIRM Boundaries. Make interpretations, where needed, as to exact location of the boundaries of the areas of special flood hazards (for example, where there appears to be a conflict between a mapped boundary and actual field conditions). The person contesting the location of the boundary shall be given a reasonable opportunity to appeal the interpretation as provided in SBMC 14.10.170 and 14.10.180. (Ord. 1167 § 4.3, 1991).

14.10.170180 Appeal board.

A. The board of adjustment as established by the South Bend city council shall hear and decide appeals and requests for variances from the requirements of this chapter.

B. The board of adjustment shall hear and decide appeals when it is alleged there is an error in any requirement, decision, or determination made by the city supervisor in the enforcement or administration of this chapter.

C. Those aggrieved by the decision of the board of adjustment, or any taxpayer, may appeal such decision to the superior court of Pacific County, as provided in RCW 35A.63.110.

D. In passing upon such applications, the board of adjustment shall consider all technical evaluations, all relevant factors, standards specified in other sections of this chapter, and:

1. The danger that materials may be swept onto other lands to the injury of others;
2. The danger of life and property due to flooding or erosion damage;
3. The susceptibility of the proposed facility and its contents to flood damage and the effect of such damage on the individual owner;
4. The importance of the services provided by the proposed facility to the community;
5. The necessity to the facility of a waterfront location, where applicable;
6. The availability of alternative locations for the proposed use which are not subject to flooding or erosion damage;
7. The compatibility of the proposed use with existing and anticipated development;
8. The relationship of the proposed use to the comprehensive plan and floodplain management program for that area;
9. The safety of access to the property in times of flood for ordinary and emergency vehicles;

10. The expected heights, velocity, duration, rate of rise, and sediment transport of the floodwaters and the effects of wave action, if applicable, expected at the site; and

11. 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.

E. Upon consideration of the factors of this section and the purposes of this chapter, the board of adjustment may attach such conditions to the granting of variances as it deems necessary to further the purposes of this chapter.

F. The city supervisor shall maintain the records of all appeal actions and report any variances to the Federal Insurance Administration upon request. (Ord. 1167 § 4.4-1, 1991).

14.10.180190 Variances – Conditions.

A. Generally, the only condition under which a variance from the elevation standard may be issued is for new construction and substantial improvements to be erected on a lot of one-half acre or less in size contiguous to and surrounded by lots with existing structures constructed below the base flood level, providing SBMC 14.10.170(D)(1) through (11) have been fully considered. As the lot size increases, the technical justification required for issuing the variance increases.

B. Variances may be issued for the reconstruction, rehabilitation, or restoration of structures listed on the National Register of Historic Places or the State Inventory of Historic Places without regard to the procedures set forth in this section.

C. Variances shall not be issued within a designated floodway if any increase in flood levels during the base flood discharge would result.

D. Variances shall only be issued upon a determination that the variance is the minimum necessary, considering the flood hazard, to afford relief.

E. Variances shall only be issued upon:

1. A showing of good and sufficient cause;
2. A determination that failure to grant the variance would result in exceptional hardship to the applicant;
3. A determination that the granting of a variance will not result in increased flood heights, additional threats to public safety, extraordinary public expense, create nuisances, cause fraud on or victimization of the public as identified in SBMC 14.10.170(D), or conflict with existing local laws or ordinances.

F. Variances as interpreted in the National Flood Insurance Program are based on the general zoning law principle that they pertain to a physical piece of property; they are not personal in nature and do not pertain to the structure, its inhabitants, economic or financial circumstances. They primarily address small lots in densely populated residential neighborhoods. As such, variances from the flood elevations should be quite rare.

G. Variances may be issued for nonresidential buildings in very limited circumstances to allow a lesser degree of floodproofing than watertight or dry-floodproofing, where it can be determined that such action will have low damage potential, complies with all other variance criteria except subsection (A) of this section, and otherwise complies with SBMC 14.10.200 and 14.10.210.

H. Any applicant to whom a variance is granted shall be given written notice that the structure will be permitted to be built with a lowest floor elevation below the base flood elevation and that the cost of flood insurance will be commensurate with the increased risk resulting from the reduced lowest floor elevation. (Ord. 1167 § 4.4-2, 1991).

14.10.190200 Flood hazard reduction.

In all areas of special flood hazards, the standards set out in SBMC 14.10.200 through 14.10.240 are required. (Ord. 1167 § 5.1, 1991).

14.10.200210 Anchoring.

A. All new construction and substantial improvements shall be anchored to prevent flotation, collapse or lateral movement of the structure resulting from hydrodynamic and hydrostatic loads including the effects of buoyancy.

B. All manufactured homes must likewise be anchored to prevent flotation, collapse or lateral movement, and shall be installed using methods and practices that minimize flood damage. Anchoring methods may include, but are not limited to, use of over-the-top or frame ties to ground anchors (reference FEMA's "Manufactured Home Installation in Flood Hazard Areas" guidebook for additional techniques). (Ord. 1167 § 5.1-1, 1991).

14.10.210220 Construction materials and methods.

A. All new construction and substantial improvements shall be constructed with materials and utility equipment resistant to flood damage.

B. All new construction and substantial improvements shall be constructed using methods and practices that minimize flood damage.

C. Electrical, heating, ventilation, plumbing and air conditioning equipment and other service facilities shall be designed and/or otherwise elevated or located so as to prevent water from entering or accumulating within the components during conditions of flooding. (Ord. 1167 § 5.1-2, 1991).

14.10.230 Storage of materials and equipment.

A. The storage or processing of materials that could be injurious to human, animal, or plant life if released due to damage from flooding is prohibited in special flood hazard areas.

B. Storage of other material or equipment may be allowed if not subject to damage by floods and if firmly anchored to prevent flotation, or if readily removable from the area within the time available after flood warning.

14.10.~~220~~240 Utilities.

- A. All new and replacement water supply systems shall be designed to minimize or eliminate infiltration of floodwaters into the system. Water wells shall be located on high ground that is not in the floodway.
- B. New and replacement sanitary sewage systems shall be designed to minimize or eliminate infiltration of floodwaters into the systems and discharge from the systems into floodwaters.
- C. On-site waste disposal systems shall be located to avoid impairment to them or contamination from them during flooding. (Ord. 1496, 2015; Ord. 1167 § 5.1-3, 1991).

14.10.~~230~~250 Subdivision proposals.

- A. All subdivision proposals shall be consistent with the need to minimize flood damage.
- B. All subdivisions proposals shall have public utilities and facilities such as sewer, gas, electrical, and water systems located and constructed to minimize flood damage.
- C. All subdivision proposals shall have adequate drainage provided to reduce exposure to flood damage.
- D. Where base flood elevation data has not been provided or is not available from another authoritative source, it shall be generated for subdivision proposals and other proposed developments which contain at least 50 lots or five acres, whichever is less. (Ord. 1167 § 5.1-4, 1991).

14.10.~~240~~260 Review of building permits.

Where elevation data is not available either through the flood insurance study or from another authoritative source (see SBMC 14.10.160(B)), applications for building permits shall be reviewed to ensure that proposed construction will be reasonably safe from flooding. The test of reasonableness is a local judgment and includes use of historical data, high water marks, photographs of past flooding, etc., where available. Failure to elevate at least two feet above grade in these zones may result in higher insurance rates. (Ord. 1167 § 5.1-5, 1991).

14.10.270 Changes to special flood hazard area.

If a project will alter the BFE or boundaries of the SFHA, then the project proponent shall provide the community with engineering documentation and analysis regarding the proposed change. If the change to the BFE or boundaries of the SFHA would normally require a Letter of Map Change, then the project approval shall be conditioned accordingly.

14.10.~~250~~280 Specific standards.

In all areas of special flood hazards where base flood elevation data has been provided as set forth in SBMC 14.10.070 or 14.10.160(B), the standards set out in SBMC 14.10.260, 14.10.300 and 14.10.310 are required. (Ord. 1496, 2015; Ord. 1167 § 5.2, 1991).

14.10.~~260~~290 Residential construction.

- A. In AE and A1-30 zones or other A zoned areas where the BFE has been determined or can be reasonably obtained, New-new construction and substantial improvement of any residential structures shall have the lowest floor, including basement, elevated to 14.5 feet NAVD, or one foot or more above the BFE. Mechanical equipment and utilities shall be waterproofed or elevated at least 14.5 feet NAVD.

~~equivalent to one foot above the BFE elevated to 14.5 feet NAVD, 1988 datum or higher, in order to be concurrent with the previous NGVD 1929 datum.~~

B. Fully enclosed areas below the lowest floor that are subject to flooding are prohibited, or shall be designed to automatically equalize hydrostatic flood forces on exterior walls by allowing for the entry or exit of floodwaters. Designs for meeting this requirement must either be certified by a registered professional engineer or architect or must meet or exceed the following minimum criteria:

1. A minimum of two openings having a total net area of not less than one square inch for every square foot of enclosed area subject to flooding shall be provided.
2. The bottom of all openings shall be no higher than one foot above adjacent grade.
3. Openings may be equipped with screens, louvers, or other coverings or devices; provided, that they permit the automatic entry and exit of floodwaters.

4. A garage attached to a residential structure, constructed with the garage floor slab below the BFE, must be designed to allow for the automatic entry and exit of floodwaters.

C. In addition to the above restrictions, all construction and substantial improvement shall comply with the FEMA National Flood Insurance Program (NFPA) floodplain management requirements. (Ord. 1496, 2015; Ord. 1167 § 5.2-1, 1991).

D. New construction and substantial improvement of any residential structure in an Unnumbered A zone for which a BFE is not available and cannot be reasonably obtained shall be reasonably safe from flooding, but in all cases the lowest floor shall be at least two feet above the Highest Adjacent Grade.

Alternatively, a registered engineer or architect may design and certify engineered openings.

14.10.270300 Nonresidential construction.

New construction and substantial improvement of any commercial, industrial or other nonresidential structure shall ~~either have the lowest floor, including basement, elevated to 14.5 feet NAVD, 1988 datum or higher, in order to be concurrent with the previous NGVD 1929 datum; or, together with attendant utility and sanitary facilities, shall meet the following requirements:~~

A. Meet the standards in Section 14.10.260, or

B. If the requirements of subsection A are not met, then new construction and substantial improvement of any commercial, industrial or other nonresidential structure shall meet all of the following requirements:

1. A- Be dry floodproofed so that below an elevation of 14.5 feet NAVD, equivalent to one foot above the base flood level the structure is watertight with walls substantially impermeable to the passage of water.
2. B- Have structural components capable of resisting hydrostatic and hydrodynamic loads and effects of buoyancy.
3. C- Be certified by a registered professional engineer or architect that the design and methods of construction are in accordance with accepted standards of practice for meeting provisions of this section based on their development and/or review of the structural design, specifications, and plans. Such certifications shall be provided to the official as set forth in SBMC 14.10.160(C)(2).

4. ~~D.~~ Nonresidential structures that are elevated, not floodproofed, must meet the same standards for space below the lowest floor as described in SBMC 14.10.260(B).

5. ~~E.~~ Applicants floodproofing residential buildings shall be notified that flood insurance premiums will be based on rates that are one foot below the floodproofed level (e.g., a building floodproofed to the base flood level will be treated as one foot below the base flood level). (Ord. 1496, 2015; Ord. 1167 § 5.2-2, 1991).

14.10.280310 Manufactured homes.

All manufactured homes to be placed or substantially improved within Zones A1 – 30, AH and AE on the community’s FIRM shall be elevated on a permanent foundation such that the lowest floor of the manufactured home, elevated to 14.5 feet NAVD, or one foot or more above the BFE. Mechanical equipment and utilities shall be waterproofed or elevated at least 14.5 feet NAVD, equivalent to one foot above the BFE ~~14.5 feet NAVD, 1988 datum or higher, in order to be concurrent with the previous NGVD 1929 datum,~~ and be securely anchored to an adequately anchored foundation system resist flotation, collapse and lateral movement in accordance with the provisions of SBMC 14.10.200(B).

A. Recreational Vehicles. Recreational vehicles placed on sites are required to either:

1. Be on the site for fewer than 180 consecutive days; or
2. Be fully licensed and ready for highway use, on wheels or jacking system, attached to the site only by quick disconnect type utilities and security devices, and have no permanently attached additions; or
3. Meet the requirements of this section and the elevation and anchoring requirements for manufactured homes.

B. AE and A1 – 30 Zones with Base Flood Elevations but No Floodways. In areas with base flood elevations (but a regulatory floodway has not been designated), no new construction, substantial improvements, or other development (including fill) shall be permitted within Zones A1 – 30 and AE on the community’s FIRM, unless it is demonstrated that the cumulative effect of the proposed development, when combined with all other existing and anticipated development, will not increase the water surface elevation of the base flood more than one foot at any point within the community. (Ord. 1496, 2015; Ord. 1167 § 5.2-3, 1991).

14.10.320 Enclosed area below the lowest flood.

If buildings or manufactured homes are constructed or substantially improved with fully enclosed areas below the lowest floor, the areas shall be used solely for parking of vehicles, building access, or storage.

14.10.330 Small Accessory Structures (Detached Garages & Small Storage Structures)

For A Zones (A, AE, A1-30, AH, AO):

A. In A, AE, A1-30, AH, and AO flood zones, small accessory structures (less than or equal to the size of a one story, two car garage) used solely for parking of vehicles or limited storage may be constructed such that the floor is below the BFE, provided the structure is designed and constructed in accordance with the following requirements.

1. Use of the small accessory structure must be limited to parking of vehicles or limited storage;

- 2.
2. The portions of the small accessory structure located below the BFE must be built using flood resistant materials;
- 3.
3. The small accessory structure must be adequately anchored to prevent flotation, collapse, and lateral movement;
- 4.
4. Any machinery or equipment servicing the small accessory structure must be elevated or flood proofed to or above the BFE;
- 5.
5. If located in a floodway, then the small accessory structure must comply with floodway encroachment provisions in Section [14.10.290\(A\)5.4-1](#);
- 6.
6. The small accessory structure must be designed to allow for the automatic entry and exit of floodwaters in accordance with Section 5.2-1(5).
- 7.
7. The structure shall have low damage potential, and
8. If the structure is converted to another use, it must be brought into full compliance with the standards governing such use.
9. The structure shall not be used for human habitation.

B. In V, VE, V1-30, and VO flood zones, small accessory structures constructed pursuant to this section may be no more than 100 square feet in size.

C. Detached garages, storage structures, and other small accessory structures not meeting the above standards must be constructed in accordance with all applicable standards in Section 18.10.340(A).

D. Upon completion of the structure, certification that the requirement of this section have been satisfied shall be provided to the Floodplain Administrator for verification.

14.10.290340 Floodways.

Areas designated as “floodways” are located within areas of special flood hazard as established in SBMC 14.10.070. Since the floodway is an extremely hazardous area due to the velocity of floodwaters which carry debris, potential projectiles, and erosion potential, the following provisions apply:

A. Prohibition of encroachments, including fill, new construction, substantial improvements, and other development unless certification by a registered professional engineer or architect is provided demonstrating that encroachments shall not result in any increase in flood levels during the occurrence of the base flood discharge.

B. Construction or reconstruction of residential structures is prohibited within designated floodways, except for:

1. Repairs, reconstruction, or improvements to a structure which do not increase the ground floor area; and

2. Repairs, reconstruction or improvements to a structure, the cost of which does not exceed 50 percent of the market value of the structure either:

a. Before the repair, reconstruction, or improvement is started; or

b. If the structure has been damaged, and is being restored, before the damage occurred. Work done on structures to comply with existing health, sanitary, or safety codes, identified and cited by the community as violations prior to the damage occurring or to structures identified as historic places shall not be included in the 50 percent market value of the structure.

C. If subsection (A) of this section is satisfied, all new construction and substantial improvements shall comply with all applicable flood hazard reduction provisions of SBMC 14.10.190 through 14.10.300.

D. Critical Facilities. Construction of new critical facilities shall be, to the extent possible, located outside the limits of the special flood hazard area (SFHA) (100-year floodplain). Construction of new critical facilities shall be permissible within the SFHA if no feasible alternative site is available. Critical facilities constructed within the SFHA shall have the lowest floor elevated three feet above BFE or to the height of the 500-year flood, whichever is higher. Access to and from the critical facility should also be protected to the height utilized above. Floodproofing and sealing measures must be taken to ensure that toxic substances will not be displaced by or released into floodwaters. Access routes elevated to or above the level of the base flood elevation shall be provided to all critical facilities to the extent possible. (Ord. 1496, 2015; Ord. 1167 § 5.3, 1991).

14.10.350 General Requirements for Other Development

All development, including manmade changes to improved or unimproved real estate for which specific provisions are not specified in this ordinance or the state building codes with adopted amendments and any City of South Bend amendments, shall:

A. Be located and constructed to minimize flood damage;

B. Meet the encroachment limitations of this ordinance if located in a regulatory floodway;

C. Be anchored to prevent flotation, collapse, or lateral movement resulting from hydrostatic loads, including the effects of buoyancy, during conditions of the design flood;

D. Be constructed of flood damage-resistant materials;

E. Meet the flood opening requirements of Section 14.10.260(B), and

F. Have mechanical, plumbing, and electrical systems above the design flood elevation or meet the requirements of ASCE 24, except that minimum electric service required to address life safety and electric code requirements is permitted below the design flood elevation provided it conforms to the provisions of the electrical part of building code for wet locations.

14.10.300360 Wetlands management.

The city of South Bend shall, to the maximum extent possible, avoid the short and long term adverse impacts associated with the destruction or modification of wetlands, especially those activities which limit

or disrupt the ability of the wetland to alleviate flooding impacts. To that end, the following process should be implemented:

A. Review proposals for development within base floodplains for their possible impacts on wetlands located within the floodplain.

B. Ensure that development activities in or around wetlands do not negatively affect public safety, health, and welfare by disrupting the wetlands' ability to reduce flood and storm drainage.

C. Request technical assistance from the Department of Ecology in identifying wetland areas. Existing wetland map information from the National Wetlands Inventory (NWI) can be used in conjunction with the community's FIRM to prepare an overlay zone indicating critical wetland areas deserving special attention. (Ord. 1496, 2015; Ord. 1167 § 5.4, 1991).

14.10.310370 Crawlspaces construction.

A. The interior grade of a crawlspace below the BFE must not be more than two feet below the lowest adjacent exterior grade (LAG).

B. The height of the below-grade crawlspace, measured from the interior grade of the crawlspace to the top of the crawlspace foundation wall, must not exceed four feet at any point.

C. The height limitation is the maximum allowable for unsupported wall height according to the engineering analyses and building code requirements for flood hazard areas.

D. This limitation will also prevent these crawlspaces from being converted into habitable spaces.

E. There must be an adequate drainage system that removes floodwaters from the interior area of the crawlspace. The enclosed area should be drained within a reasonable time after a flood event. The type of drainage system will vary because of the site gradient and other drainage characteristics, such as soil types. Possible options include natural drainage through porous, well-drained soils and drainage systems such as perforated pipes, drainage tiles, or gravel or crushed stone drainage by gravity or mechanical means. The velocity of floodwaters at the site should not exceed five feet per second for any crawlspace. For velocities in excess of five feet per second, other foundation types should be used. The city has adopted by reference appropriate pages in FEMA Technical Bulletin 11-01 which pertain to the above. (Ord. 1496, 2015; Ord. 1369 §§ 1 – 5, 2007).