ORDINANCE NO. 630

AN ORDINANCE of the City Council of the City of Lakewood, Washington, amending Titles 14A and 18A relative to Floodplain and Critical Area Regulations.

WHEREAS, The Washington State Growth Management Act (GMA) requires that cities periodically review and update their Critical Area Ordinances (CAO) to ensure that they are in compliance with current regulations and legislative changes that may have occurred; and

WHEREAS, the City of Lakewood is a participating jurisdiction in the National Flood Insurance Program (NFIP), and is therefore required to maintain a floodplain management program and associated ordinances that meet the requirements of the NFIP as established by the Federal Emergency Management Agency (FEMA) which have changed since the City last reviewed its regulations; and,

WHEREAS, the Planning Commission has held public hearings and meetings on October 7, 2015, November 4, 2015 and November 18, 2015. The Planning Commission has found that the proposed changes to the Land Use and Development Code are consistent with the adopted Lakewood Comprehensive Plan and will not adversely affect the public health , safety and general welfare of the citizens of the city; and,

WHEREAS, the Planning Commission has found affirmatively that the proposed amendments satisfy the applicable findings of LMC 18A.02.415;

WHEREAS these proposed amendments were submitted to FEMA and the Washington State Department of Ecology for review and comment, and the Washington State Department of Commerce as required by RCW 36.70A.106;

NOW, THEREFORE, THE CITY COUNCIL OF THE CITY OF LAKEWOOD, WASHINGTON, DO ORDAIN as follows:

Section 1: Section 14A.154.020 LMC entitled "Designation of Critical Fish and Wildlife Habitat Areas" is amended to read as follows:

A. General. This Chapter applies to proposed regulated activities within critical fish and wildlife habitat areas. Critical fish and wildlife habitat areas are those areas identified either by known point locations of specific species (such as a nest or den) or by habitat areas or both.

B. Identification of Critical Fish and Wildlife Species and Habitats.

1. Critical Fish and Wildlife Habitat Areas.

a) Federal and State-Listed Species and their Associated Habitats. Areas which have a primary association with federally or state listed endangered, threatened, or sensitive species of fish or wildlife (specified in 50 CFR 17.11, 50

CFR 17.12, WAC 232-12-014 and WAC 232-12-297) and which, if altered, may reduce the likelihood that the species will maintain and reproduce over the long term. ~~Endangered, threatened, or sensitive species found in Lakewood are listed in Appendix B.~~

b) Habitats and Species of Local Importance, including the following:

(1) Areas with which state listed monitor or candidate species or federally listed candidate species have a primary association, and which, if altered, may reduce the likelihood that the species will maintain and reproduce over the long term. ~~Special status and monitored species potentially found in Lakewood are listed in Appendix B.~~

(2) Documented habitat areas or outstanding potential habitat areas for fish and wildlife species. These areas include specific habitat types which are infrequent in occurrence in Pierce County and Lakewood, and may provide specific habitats with which endangered, threatened, sensitive, candidate, or monitor species have a primary association, such as breeding habitat, winter range, and movement corridors. These areas include the following:

(a) Priority Oregon White Oak Woodlands
(b) Prairies
(c) Old growth forests
(d) Caves
(e) Cliffs
(f) Snag-rich areas
(g) Rivers and streams with critical fisheries ~~as specifically set forth in 14A.154.050 B.~~;
(h) Naturally occurring ponds under twenty acres and their submerged aquatic beds that provide fish or wildlife habitat;
(i) Waters of the state, including all water bodies classified by the Washington Department of Natural Resources (DNR) water typing classification system as detailed in WAC 222-16-030, together with associated riparian areas;
(j) Lakes, ponds, streams, and rivers planted with game fish by a governmental entity or tribal entity;
(k) State natural area preserves and natural resource conservation areas.

2. Mapping.

The resources listed below provide information on fish and wildlife habitat areas:

a. Puget Sound Environmental Atlas, Puget Sound Water Quality Authority.

b. The following Washington Department of Natural Resources documents and data sources:

1. Stream Typing Maps.
2. Natural Heritage Data Base.

c. The following Washington Department of Wildlife documents and data sources:

1. Priority Habitats and Species Program.
2. Non-game Data Base.
3. Washington Rivers Information System.

d. The following Washington Department of Fisheries documents:

1. Water Resource Index Areas (WRIA).

Section 2: Section 14A.154.030 LMC entitled "Habitat Protection Standards" is amended to read as follows:

A. Education and Information.

A voluntary education program to explain the need for and methods of habitat management will help provide for long-term protection and enhancement of critical fish and wildlife habitat areas. By informing citizens of the declining populations of several fish and wildlife species in Pierce County, the diminishing animal habitat available, and the management techniques that individuals can use to preserve and restore fish and wildlife habitat areas, the City can foster good stewardship of the land by property owners.

1. The Department will provide educational materials and lists of additional sources of information to applicants proposing regulated activities in the vicinity of critical fish and wildlife habitat areas. Materials will be selected from a variety of state and local resources.

2. The Department will accumulate information on the number of proposed activities associated with fish and wildlife habitat areas as identified by this Chapter and indicated by County maps to be in the vicinity of identified critical fish and wildlife habitats pursuant to 14A.154.020. Information shall include the number of single family residences and other development occurring in the vicinity of critical fish and wildlife areas. Based on this information, additional regulations may be developed.

B. Use of Existing Procedures and Laws~~?~~,Biological Assessments.

The primary procedures used to implement this Chapter shall include this Chapter itself, the City~~?~~' s Land Use and Development Code ~~(particularly Section 18A.40.200 relating to riparian areas)~~, the State Environmental Policy Act (RCW 43.21C), the City's

Environmental Regulations, the State Shorelines Management Act (RCW 90.58), and the City's Shoreline Management Regulations.

Regulated activities subject to environmental review shall be reviewed with consideration for impacts on critical fish and wildlife habitat as identified in this Title. The Community Development Director may require a biological assessment prepared by a qualified wildlife biologist whenever the Director finds that a project site may contain, affect, or be affected by, species or habitats designated in this Chapter. Biological assessments shall be prepared in accordance with ~~Appendix A~~ LMC 14A.154.050.B, and are subject to the review and approval of the Director.

Projects undergoing review for fish and wildlife considerations shall be routed to the Washington Department of Fish and Wildlife, the Washington Department of Ecology, the US Fish and Wildlife Service, the US Army Corps of Engineers and any other appropriate state and federal agencies. These agencies will have an opportunity to provide specific habitat information on proposed development sites, advise the City of their jurisdiction and applicable permit requirements, and suggest appropriate project modifications and or other mitigation.

The City shall give substantial weight to the management recommendations contained in the Washington Department of Fish and Wildlife Priority Habitats and Species Program, particularly the management recommendations for Oregon White Oak Woodlands.

Section 3: Section 14A.154.040 LMC entitled "Title and Plat Notification" is amended to read as follows:

For regulated activities where a Habitat Assessment or Habitat Management Plan has been prepared as part of the proposal's environmental review, the owner of the site shall record a notice of the reports with the Pierce County Auditor so that information is known if the property ownership changes.

A. Title Notification.

The owner of any site where a habitat assessment or habitat management plan has been prepared for a development proposal shall record a notice with the Pierce County Auditor in the form set forth below:

Form of Notice:

FISH AND WILDLIFE HABITAT AREA NOTICE

*Parcel Number:*_____

*Address:*_____

Legal Description: _____

*Present Owner:*_____

Notice: This site lies within/ contains a critical fish and wildlife habitat area as defined by Chapter 14A.154 of the Lakewood Municipal Code. The site was the subject of a development proposal for _____
application number _____
*filed on*_____ *(date).*
Restrictions on use or alteration of the site may exist due to natural conditions of the site and resulting regulation. Review of such application has provided information on the location of the fish and wildlife habitat area and any restriction on use.

_____
Signature of Owner(s)

_____
Date

(NOTARY ACKNOWLEDGMENT)

B. Plat Notification.

For all proposed short subdivision and subdivision proposals within critical fish and wildlife habitat areas, the applicant shall include a note on the face of the plat. ~~The note shall be as set forth below:~~

Section 4: Section 14A.154.050 LMC entitled "Habitat Protection for Rivers and Streams" is amended to read as follows:

Regulated activities proposed along rivers and streams shall provide for habitat protection.

A. Habitat Protection for Rivers and Streams Shall be Provided Through Buffers.

1. The buffer, consisting of undisturbed natural vegetation, shall be required along all streams, as classified by the DNR water typing classification system (WAC 222-16-030). The buffer shall extend landward from the ordinary high water mark of the water body.

   a. Outside of the buffer removal of native vegetation shall not exceed 35 percent of the surface area of the portion of the site in the Regulatory Floodplain. Native vegetation within the buffer portion of the property can be counted toward this requirement.

2. The buffer of a river or stream shall not extend landward beyond an existing substantial improvement such as an improved road, dike, levee, or a permanent

structure which reduces the impact proposed activities would have on the river or stream.

3. Buffer widths shall be as established by the City of Lakewood Shoreline Master Program (SMP) as contained in Chapter 4, Section C of the SMP.

4. If a proposed project does not meet the criteria established in LMC 18A.40.180.A. and B. a habitat impact assessment shall be conducted in accordance with Section 14A.154.050.C, and if necessary, a habitat mitigation plan shall be prepared and implemented in accordance with the provisions of this chapter.

~~B. Critical Fishery Rivers and Streams Requiring Buffers. The following river and stream (segments) have been identified by the various Indian tribes, particularly the Puyallup Tribe, as being critical to anadramous fish and, therefore, requiring a larger buffer protection. Critical fishery rivers and streams include:~~

~~Stream Name~~	~~WRIA#~~	~~Buffer Width In Feet~~	~~Tribe Identifying~~
~~Chambers Creek~~	~~12.0007~~	~~150~~	~~Puyallup~~
~~Clover Creek~~	~~12.0007~~	~~50~~	

~~C~~ B. ~~Other Rivers and Streams Requiring Buffers. For rivers and streams other than Chambers and Clover Creek, a habitat protection buffer shall be provided as outlined in LMC Section 18A.40.230 (Riparian Overlay Zone), or 35 feet, whichever is greater.~~ Habitat Impact Assessment.

Unless allowed under Sec. 18A.40.180, a permit application to develop in the Regulatory Floodplain shall include an assessment of the impact of the project on water quality and aquatic and riparian habitat. The assessment shall be:

1. A biological evaluation or biological assessment that has received concurrence from the U.S. Fish and Wildlife Service or the National Marine Fisheries Service, pursuant to Section 7 of the Endangered Species Act; or

2. Documentation that the activity fits within a habitat conservation plan approved pursuant to Section 10 of the Endangered Species Act; or

3. Documentation that the activity fits within Section 4(d) of the Endangered Species Act; or

4. An assessment prepared in accordance with the most current Regional Guidance for Floodplain Habitat Assessment and Mitigation, FEMA (Federal Emergency Management Agency) Region X. The assessment shall determine if the project would adversely affect:

a. The primary constituent elements identified when a species is listed as threatened or endangered,
b. Essential fish habitat designated by the National Marine Fisheries Service,
c. Fish and wildlife habitat conservation areas,
d. Vegetation communities and habitat structures,
e. Water quality,
f. Water quantity, including flood and low flow depths, volumes and velocities,
g. The channel's natural planform pattern and migration processes,
h. Spawning substrate, if applicable, and/or,
i. Floodplain refugia, if applicable.

C. Habitat Mitigation Plan

1. If the assessment conducted under Sec. 14A.154.050.C concludes the proposed project is expected to have an adverse effect on water quality and/or aquatic or riparian habitat or habitat functions, the applicant shall provide a plan to mitigate those impacts, in accordance with the current Regional Guidance for Floodplain Habitat Assessment and Mitigation, FEMA (Federal Emergency Management Agency) Region X.

a. If the proposed project is located outside of the protected area, the mitigation plan shall include such avoidance, minimization, restoration, or compensation measures as are appropriate for the situation.

b. If the proposed project is located within the protected area, the mitigation plan shall include such appropriate measures as are needed to ensure that there is no adverse effect due to the project. Minimization measures are not allowed in the protected area, unless they, in combination with other measures result in no adverse effect. No compensatory mitigation is allowed in the Protected Area.

2. The plan's habitat mitigation activities shall be incorporated into the proposed project. The floodplain development permit shall be based on the redesigned project and its mitigation components.

3. A certificate of occupancy or final inspection approval for a project shall not be issued until all work identified in the biological evaluation, biological assessment, or mitigation plan has been completed or the applicant has provided the necessary assurances that unfinished portions of the project will be completed.

D. Compensatory Storage

New development shall not reduce the effective flood storage volume of the Regulatory Floodplain. A development proposal shall provide compensatory storage if grading or other activity displaces any effective flood storage volume. Compensatory storage shall:

1. Provide equivalent volume at equivalent elevations to that being displaced. For this purpose, "equivalent elevation" means having similar relationship to ordinary high water and to the best available 10-year, 50-year and 100-year water surface profiles;

2. Be hydraulically connected to the source of the flooding; and

3. Provide compensatory storage in the same construction season as when the displacement of flood storage volume occurs and before flood season begins.

4. The newly created storage area shall be graded and vegetated to allow fish access during flood events without creating fish stranding sites.

Section 5: Section 14A.158.020 LMC entitled "Designation" is amended to read as follows:

All Areas of Special Flood Hazard shall be as identified in the scientific and engineering report entitled "The Flood Insurance Study for Pierce County," dated August 19, 1987, or as amended, with accompanying Flood Insurance Rate Maps prepared by the Federal Emergency Management Agency (FEMA). A copy of which shall be maintained with the City Clerk

Section 6: Section 14A.162.020 LMC entitled "Designation of Wetland Areas" is amended to read as follows:

~~The City will require the use of the following documents to determine the presence or absence of potential wetlands:~~

~~a. Federal Manual for Identifying and Delineating Jurisdictional Wetlands, Corps of Engineers Wetlands Delineation Manual, 1987 Edition and corresponding guidance letters; and~~
~~b. Washington State Wetlands Identification and Delineation Manual, March 1997 Edition (DOE Publication 96-94).~~

Identification of wetlands and delineation of their boundaries pursuant to this Chapter shall be done in accordance with the approved federal wetland delineation manual and applicable regional supplements. All areas within the City meeting the wetland designation criteria in that procedure are hereby designated critical areas and are subject to the provisions of this Chapter.

Section 7: Section 14A.162.030 LMC entitled "Wetland Categories" is amended to read as follows:

In order to provide information on the functions and values of wetlands in a time- and cost-effective way, wetland analysis reports shall categorize wetlands by their attributes and characteristics. Wetlands shall be rated using the latest adopted version of the *Washington State Wetland Rating System for Western Washington* published by the Washington State Department of Ecology. ("State Wetland Rating System").

The State Wetland Rating System provides the detailed criteria for establishing wetland categories. Wetlands are generally designated as follows:

Category I wetlands are those that 1) represent a unique or rare wetland type; or 2) are more sensitive to disturbance than most wetlands; 3) are relatively undisturbed and contain ecological attributes that are impossible to replace within a human lifetime; or 4) provide a high level of functions. Generally, these wetlands are not common and make up a small percentage of the wetlands in the region. The following are considered Category I wetlands:

- Bogs
- Mature and Old-growth Forested Wetlands
- Wetlands That Perform Many Functions Very Well- Wetlands scoring ~~70~~ 23-27 points ~~or more (out of 100)~~ using the *Washington State Wetland Rating System for Western Washington*, Ecology Publication ~~# 04-06-025~~ #14-06-029.

Category II wetlands are difficult, though not impossible, to replace, and provide high levels of some functions. These wetlands occur more commonly than Category I wetlands, but still need a relatively high level of protection. Category II wetlands in western Washington include ~~?~~Wetlands That Perform Functions Well~~?~~- Wetlands scoring between ~~51-69~~ 20-22 points ~~(out of 100)~~ using the *Washington State Wetland Rating System for Western Washington.* Wetlands scoring ~~51-69~~ 20-22 points were judged to perform most functions relatively well, or performed one group of functions very well and the other two moderately well.

Category III wetlands are wetlands with a moderate level of functions (scores between ~~30 -50~~ 16-19 points) using the *Washington State Wetland Rating System for Western Washington.* Category III wetlands usually have been disturbed in some ways, and are often less diverse or more isolated from other natural resources in the landscape than Category II wetlands.

Category IV wetlands have the lowest levels of functions (scores ~~less than 30~~ between 9-15 points) and are often heavily disturbed. These are wetlands that we should be able to replace, and in some cases be able to improve. These wetlands may provide some important functions.

Section 8: Section 14A.162.080 LMC entitled "Protection Standards - Establishing Buffers" is amended to read as follows:

A. ~~Buffer widths shall be determined according to the following table:~~

~~Wetland Category~~	~~Buffer Width~~
~~I~~	~~200 feet~~

~~II 100 feet~~
~~III 75 feet~~
~~IV 50 feet~~

Buffer Requirements. The buffer widths in Table 14.1 have been established in accordance with the best available science. They are based on the category of wetland and the habitat score as determined by a qualified wetland professional using the Washington state wetland rating system for western Washington.

1. The use of the buffer widths in Table 14.1 requires the implementation of the measures in Table 14.2, where applicable, to minimize the impacts of the adjacent land uses.

2. If an applicant chooses not to apply the mitigation measures in Table 14.2, then a 33% increase in the width of all buffers is required. For example, a 75-foot buffer with the mitigation measures would be a 100-foot buffer without them.

3. The buffer widths in Table 14.1 assume that the buffer is vegetated with a native plant community appropriate for the ecoregion. If the existing buffer is unvegetated, sparsely vegetated, or vegetated with invasive species that do not perform needed functions, the buffer should either be planted to create the appropriate plant community, or the buffer should be widened to ensure that adequate functions of the buffer are provided.

4. The buffer at its narrowest point is never less than either ¾ of the required width or 75 feet for Category I and II, 50 feet for Category III and 25 feet for Category IV, whichever is greater.

Table 14.1 Wetland Buffer Requirements

	Buffer width (in feet) based on habitat score			
Wetland Category	**3-4**	**5**	**6-7**	**8-9**
Category I: Based on total score	75	105	165	225
Category I: Bogs and Wetlands of High Conservation Value	190			225
Category I: Coastal Lagoons	150		165	225

Category I: Interdunal				225 ft
Category I: Forested	75	105	165	225
Category I: Estuarine	150 (buffer width not based on habitat scores)			
Category II: Based on score	75	105	165	225
Category II: Interdunal Wetlands	110		165	225
Category II: Estuarine	110 (buffer width not based on habitat scores)			
Category III (all)	60	105	165	225
Category IV (all)	40			

Table 14.2 Required measures to minimize impacts to wetlands

(Measures are required if applicable to a specific proposal)

Disturbance	Required Measures to Minimize Impacts
Lights	• Direct lights away from wetland
Noise	• Locate activity that generates noise away from wetland • If warranted, enhance existing buffer with native vegetation plantings adjacent to noise source • For activities that generate relatively continuous, potentially disruptive noise, such as certain heavy industry or mining, establish an additional 10' heavily vegetated buffer strip immediately adjacent to the outer wetland buffer
Toxic runoff	• Route all new, untreated runoff away from wetland while ensuring wetland is not dewatered • Establish covenants limiting use of pesticides within 150 ft of wetland • Apply integrated pest management

Disturbance	Required Measures to Minimize Impacts
Stormwater runoff	• Retrofit stormwater detention and treatment for roads and existing adjacent development • Prevent channelized flow from lawns that directly enters the buffer • Use Low Intensity Development techniques (for more information refer to the drainage ordinance and manual)
Change in water regime	• Infiltrate or treat, detain, and disperse into buffer new runoff from impervious surfaces and new lawns
Pets and human disturbance	• Use privacy fencing OR plant dense vegetation to delineate buffer edge and to discourage disturbance using vegetation appropriate for the ecoregion • Place wetland and its buffer in a separate tract or protect with a conservation easement
Dust	• Use best management practices to control dust
Disruption of corridors or connections	• Maintain connections to offsite areas that are undisturbed • Restore corridors or connections to offsite habitats by replanting

B. Buffer widths may be modified by averaging, reducing, or increasing.

1. Buffer width averaging may be allowed only where the applicant demonstrates the following:

   a. Buffer encroachment is unavoidable.

   b. A habitat assessment has been submitted which demonstrates that the site does not provide habitat for any endangered, threatened, or sensitive fish or animal species; or,

   c. For wetlands and/or required buffers associated with documented habitat for endangered, threatened, or sensitive fish, or wildlife species, a habitat assessment report has been submitted that demonstrates that the buffer modification will not result in an adverse impact to the species of study.

   d. The wetland contains variations in sensitivity due to existing physical characteristics; and

   e. Width averaging will not adversely impact the wetland or critical fish and wildlife habitat; and

f. The total buffer area after averaging is no less than the buffer area prior to averaging; and

g. The minimum buffer width will not be less than ~~twenty-five~~ seventy-five percent of the widths established in 14A.162.080.A above.

h. The averaging is accomplished within the project boundaries.

i. Buffer width averaging shall only be permitted where it is shown that there is no feasible alternatives to the site design that could be accomplished without buffer averaging.

2. Buffer width reduction may be allowed only where the applicant demonstrates the following circumstances. Such reduction shall not result in greater than a ~~thirty-five~~ twenty-five percent (~~3~~ 25%) reduction in the buffer width established in 14A.162.080.A. and shall result in a buffer no less than 30 feet in any case.

   a. The proposed buffer area is extensively vegetated and has less than fifteen percent slopes, and the reduction will not result in adverse impacts to the wetland; or

   b. The project includes a buffer enhancement plan, as part of the mitigation required by Section 14A.162.100. The buffer enhancement plan shall use plant species which are indigenous to the project area, and shall substantiate that an enhanced buffer will improve the functional attributes of the buffer to provide additional protection for wetland functional values; or

   c. The acreage included in the buffer would substantially exceed the size of the wetland and the reduction will not result in adverse impacts to the wetland or the project includes a buffer enhancement plan which ensures that the reduction will not result in adverse impacts to the wetland.

3. The Department may require increased buffer width when a larger buffer is necessary to protect wetland functions and values based on local conditions. This determination shall be reasonably related to protection of the functions and values of the regulated wetland. Such determination shall demonstrate that:

   a. A larger buffer is necessary to maintain viable populations of existing species; or

   b. The wetland is used by species listed by the federal government or the state as endangered, threatened, sensitive or as documented priority species or habitats, or essential or outstanding potential sites such as heron rookeries or raptor nesting areas; or

c. The adjacent land is susceptible to severe erosion and erosion control measures will not effectively prevent adverse wetland impacts; or

d. The adjacent land has minimal vegetative cover or slopes greater than fifteen percent.

C. Buffers shall be measured perpendicular from the wetland edge.

D. When buffer boundaries have been determined, they shall be marked in the field by a licensed surveyor. The markers shall be clearly visible, durable, and permanently affixed to the ground.

E. A building setback line of eight (8) feet shall be required from the edge of a buffer.

F. Except as otherwise specified, buffers shall be retained in a natural condition.

G. A wetland buffer shall not be required to extend beyond an existing substantial improvement such as an improved road, dike, levee, or a permanent structure, where the existing improvement obviates the beneficial impact that the buffer would provide for the wetland.

Section 9: Section 14A.162.090 LMC entitled "Protection Standards ~~as~~ for Allowing Regulated Activities in Wetlands and Buffers" is amended to read as follows:

A. Regulated activities in Category III and IV wetlands and/or buffers for Category III and IV wetlands may be allowed when the applicant demonstrates to the Department that all adverse impacts to wetlands will be mitigated according to Section 14A.162.100;

B. The placement of access roads, utility lines, and utility poles may be allowed in buffers for Category II wetlands if the following conditions are met:

1. There is no feasible alternative location for an access road and/or utilities to the site; and

2. The applicant demonstrates that all adverse impacts to wetlands will be mitigated according to a mitigation plan which complies with ~~Appendix C~~ 14A.162.100.

C. The following activities may be allowed in a buffer without a complete mitigation plan if the applicant demonstrates to the Department that all adverse impacts to wetlands will be mitigated according to Section 14A.162.100. In cases that require environmental review, a threshold environmental determination may not be made until the Department is satisfied that adequate mitigation will occur. The allowed activities are as follows:

1. One well and necessary appurtenances, including a pump and appropriately sized pump house, but not including a water storage tank (unless the water storage tank

can be contained within the pump house), may be allowed on each site in a buffer if all the following conditions are met:

a. The pump house is a one story building with a ground area of less than 220 square feet; and

b. The well is more than 75 feet deep; and

c. For Category I and II wetlands, the minimum distance from the well and appurtenances to the wetland edge is no less than fifty percent of the buffer widths established in the table in Section 14.162.070 A.; and

d. Access to the well and pump house shall be by a pervious trail for pedestrian traffic only, or, if necessary, by an unimproved access for a maintenance vehicle.

2. Pervious walkways and trails and associated viewing platforms, provided that those pathways are limited to minor crossings having no adverse impact on water quality. They should be generally parallel to the perimeter of the wetland, located only in the outer twenty-five percent (25%) of the wetland buffer area and located to avoid removal of significant trees. They should be limited to pervious surfaces no more than five (5) feet in width for pedestrian use only. Raised boardwalks utilizing non-treated pilings may be acceptable. I~~i~~n the case of Category I wetlands the minimum distance from the wetland edge is no less than fifty percent of the buffer width established in the table in Section 14.162.070 A.

3. The placement of utility lines which do not require excavation, or utility poles, in any part of a buffer for a Category II, III, or IV wetland. They may be placed in a buffer for a Category I wetland, provided that the minimum distance from the wetland edge is no less than fifty percent of the Category I buffer width established in the table in Section 14.162.070 A.

4. Activities within that area of a buffer in which a direct line to the wetland is obstructed by an existing substantial improvement such as an improved road or a permanent structure, the presence of which significantly reduces the likely impact of the proposed activity on the wetland.

A zoning certification, building permit, and/or site development permit shall not be issued for these regulated activities until the applicant demonstrates to the satisfaction of the Department that all adverse impacts to wetlands will be mitigated according to Section 14A.162.100.

D. Reasonable Use Exception- Category I and II Wetlands: Regulated activities in Category I and II wetlands and/or buffers for Category I and II wetlands may be allowed only if, following a public hearing, the Hearing Examiner determines that a reasonable use

exception is warranted pursuant to LMC Section 14A.142.080, and the following criteria are met:

1. No reasonable use with less impact on the wetland is possible; and

2. There is no feasible on-site alternative to the proposed activities, including phasing of project implementation, change in timing of activities, revision of road and lot layout, and/or related site planning and density considerations, that would allow a reasonable economic use with less adverse impacts to wetlands; and

3. The proposed activities will result in minimum feasible alteration or impairment to the wetland's functional characteristics and existing contours, vegetation, fish and wildlife resources, and hydrological conditions; and

4. The disturbance of wetlands has been minimized by locating any necessary activities outside the wetland to the extent possible; and

5. The proposed activities will not jeopardize the continued existence of species listed by the federal government or the state as endangered, threatened, sensitive, or documented priority species or priority habitats; and

6. The proposed activities will not cause significant degradation of groundwater or surface water quality; and

7. The proposed activities comply with all state, local and federal laws, including, but not limited to, those related to sediment control, pollution control, floodplain restrictions, and on-site wastewater disposal; and

8. Any and all regulated activities in wetlands and buffers will be mitigated according to Section 14A.162.100. The Examiner may require the preparation of a formal mitigation plan; and

9. There will be no damage to nearby public or private property and no threat to the health or safety of people on or off the property; and

10. The inability to derive reasonable economic use of the property is not the result of actions by the applicant in segregating or dividing the property and creating the undevelopable condition after the effective date of this Chapter.

E. Reasonable Use Provision, Categories III and IV Wetlands: If an applicant for a regulated activity on a Category III or IV wetland and/or associated buffer cannot obtain permission through the procedures described in 14A.162.090 A. and 14A.162.090 C., the activity may be allowed if, following a public hearing, the Hearing Examiner determines the criteria of 14.162.090 D. are met.

Section 10: Section 14A.162.100 LMC entitled "Mitigation" is amended to read as follows:

A. All activities in wetlands and/or buffers shall be mitigated according to this Section. ~~Usually,~~ M~~m~~itigation sequencing is used to determine the type and extent of mitigation and is considered in order of preference, however there may be circumstances when an alternative mitigation strategy is preferable such as a mitigation bank, in-lieu fee program, or advance mitigation project that is implemented according to federal and state rules, state policy and state water quality regulations.

The order of preference for mitigation is:

1. Avoiding the impact altogether by not taking a certain action or parts of actions, and providing specified buffers and setbacks. Provision of specified buffers and setbacks is the expected method of mitigation unless an activity is listed as exempt, a reasonable use exception has been granted according to the provisions of this Chapter, or an appropriate alternative mitigation program has been approved through a formal mitigation plan.

2. Minimizing impacts by limiting the degree or magnitude of the action and its implementation, by using appropriate technology, or by taking affirmative steps to reduce impacts;

3. The following types of mitigation (no order of preference):

   a. Rectifying the impact by repairing, rehabilitating, or restoring the affected environment;

   b. Reducing or eliminating the impact over time by preservation and maintenance operations during the life of the action;

   c. Compensating for the impact by replacing or providing substitute resources or environments.~~, however compensatory mitigation shall not be required for reasonable use exceptions~~;

4. Monitoring the impact and compensation and taking appropriate corrective measures.

5. Mitigation for individual actions may include a combination of the above measures.

~~B. Regulated activities which occur in buffers or within Category III and IV wetlands shall be mitigated according to a mitigation plan approved by the Department. See Appendix D for specific requirements of this mitigation plan. Where environmental review is required, a threshold determination may not be made prior to Department review and approval of the mitigation plan.~~

~~C. Compensatory mitigation shall be required for filling wetlands and for other regulated activities in wetlands (except where the filling or other regulated activity has been found to be necessary to provide for reasonable use of a property through the reasonable use exception process). Compensatory mitigation programs shall meet the following minimum requirements:~~

~~1. A wetland specialist shall develop a compensatory mitigation plan that provides for construction, maintenance, and monitoring of any replacement wetlands;~~

~~2. The applicant and/or applicant's representatives shall demonstrate to the Department sufficient scientific expertise to carry out the compensation project;~~

~~3. The compensation area shall be provided with permanent protection and management to avoid further degradation and to provide for the long term persistence of the compensation area as designed.~~

~~4. The compensatory mitigation plan shall be completed in two phases, a conceptual phase and a detailed phase.~~

~~a. Conceptual Phase. The applicant shall submit to the Department a conceptual mitigation plan for compensatory mitigation. Where environmental review is required, the Department shall not make a threshold determination prior to Department review of the conceptual mitigation plan. See Appendix E for specific requirements of the conceptual mitigation plan.~~

~~b. Detailed Phase. Following the Department's approval of the conceptual mitigation plan, the applicant shall submit a detailed mitigation plan for compensatory mitigation to the Department. See Appendix F for specific requirements of the detailed mitigation plan.~~

B. Compensatory mitigation for alterations to wetlands shall be used only for impacts that cannot be avoided or minimized and shall achieve equivalent or greater biologic functions. Compensatory mitigation plans shall be consistent with *Wetland Mitigation in Washington State–Part 2: Developing Mitigation Plans—Version 1,* (Ecology Publication #06-06-011b, Olympia, WA, March 2006, or as revised), and *Selecting Wetland Mitigation Sites Using a Watershed Approach (Western Washington)* (Publication #09-06-32, Olympia, WA, December 2009).

1. Mitigation ratios shall be consistent with Paragraph 3 below.
2. Mitigation requirements may also be determined using the credit/debit tool described in *Calculating Credits and Debits for Compensatory Mitigation in Wetlands of Western Washington: Final Report* (Ecology Publication #10-06-011, Olympia, WA, March 2012, or as revised) consistent with subsection H of this Chapter.

3. Wetland Mitigation Ratios[1]:

Category and Type of Wetland	**Creation or Re-establishment**	**Rehabilitation**	**Enhancement**
Category I: Bog, Natural Heritage site	Not considered possible	Case by case	Case by case
Category I: Mature Forested	6:1	12:1	24:1
Category I: Based on functions	4:1	8:1	16:1
Category II	3:1	6:1	12:1
Category III	2:1	4:1	8:1
Category IV	1.5:1	3:1	6:1

[1] Ratios for rehabilitation and enhancement may be reduced when combined with 1:1 replacement through creation or re-establishment. See Table 1a, *Wetland Mitigation in Washington State – Part 1: Agency Policies and Guidance –Version 1,* (Ecology Publication #06-06-011a, Olympia, WA, March 2006 or as revised).

~~5~~ 4. The detailed mitigation plan shall be signed by the wetland specialist to indicate that the plan is according to specifications determined by the wetland specialist. A signed original mitigation plan shall be submitted to the Department.

~~6~~ 5. Approval of the detailed mitigation plan shall be signified by a notarized memorandum of agreement signed by the applicant and Department Director or designate, and recorded with the County Auditor. The agreement shall refer to all requirements for the mitigation project.

~~7~~ 6. The mitigation project shall be completed according to a schedule agreed upon between the Department and the applicant.

~~8~~ 7. Wetland mitigation shall occur according to the approved wetland mitigation plan, and shall be consistent with provisions of this Chapter.

~~9~~ 8. On completion of construction for the wetland mitigation project, the wetland specialist shall notify the Department. The Department will inspect and review the construction project prior to acceptance.

Section 11: Section 14A.165.010 LMC entitled "Definitions" is amended to read as follows:

For the purpose of this Title, in addition to the definitions in Chapter 18A.90 LMC, the following definitions shall apply:

"Abutting" means bordering upon, to touch upon, in physical contact with. Sites are considered abutting even though the area of contact may be only a point.

"Activity" means any use conducted on a site.

"Agricultural activities" means the production of crops and/or raising or keeping livestock, including operation and maintenance of farm and stock ponds, drainage ditches, irrigation systems, and normal operation, maintenance and repair of existing serviceable agricultural structures, facilities or improved areas, and the practice of aquaculture. Forest practices regulated under Chapter 76.09 RCW, Title 222 WAC are not included in this definition.

"Alluvial geologic unit" means geologically recent stream, lake, swamp and beach deposits of gravel, sand, silt and peat.

"Animal Containment Area" means a site where two or more animal units of large animals per acre or .75 of an animal unit of small animals per acre are kept, and where a high volume of waste material is deposited in quantities capable of impacting groundwater resources.

"Animal Unit" means the equivalent of 1000 pounds of animal.

"Applicant" means a person, party, firm, corporation, or other legal entity that proposes a development on a site.

"Aquifer" means a saturated geologic formation which will yield a sufficient quantity of water to serve as a private or public water supply.

"Aquifer recharge area" means areas where the prevailing geologic conditions allow infiltration rates which create a high potential for contamination of groundwater resources or contribute significantly to the replenishment of groundwater with potential to be used for potable water. For the purposes of this Title, all of the area located within the Clover/Chambers Creek Basin boundary or the two highest DRASTIC zone boundaries is included in the aquifer recharge area.

"Aquifer Susceptibility" means the ease with which contaminants can move from the land surface to the aquifer based solely on the types of surface and subsurface materials in the area. Susceptibility usually defines the rate at which a contaminant will reach an aquifer unimpeded by chemical interactions with the vadose zone media.

"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." The area subject to the base flood is the Special Flood Hazard Area designated on Flood Insurance Rate Maps as Zones "A" or "V".

"Base Flood Elevation" means the elevation of the base flood above the datum of the effective firm.

"Basement" means any area of a structure having its floor sub-grade (below ground level) on all sides.

"Best management plan" means a plan developed for a property which specifies best management practices for the control of animal wastes, stormwater runoff, and erosion.

"Buffer" means an area contiguous with a critical area that is required for the integrity, maintenance, function, and structural stability of the critical area.

"Building footprint" means the horizontal area measured within the outside of the exterior walls of the ground floor of all principal and accessory buildings on a lot.

"Channel Migration Area" means that area within the lateral extent of likely stream channel movement due to stream bank destabilization and erosion, rapid stream incision, aggradation, avulsions, and shifts in location of stream channels plus 50 feet.

"Class" means one of the wetland classes used to categorize wetlands by their attributes and characteristics. Wetlands shall be rated using the latest adopted version of the Washington State Wetland Rating System for Western Washington published by the Washington State Department of Ecology.

"Class I Injection Well" means a well used to inject industrial, commercial, or municipal waste fluids beneath the lowermost formation containing, within 1/4 mile of the well bore, and underground source of drinking water.

"Class II Injection Well" means a well used to inject fluids:
Brought to the surface in connection with conventional oil or natural gas exploration or production and may be commingled with wastewater's from gas plants that are an integral part of production operations, unless those waters are classified as dangerous wastes at the time of injection. For enhanced recovery of oil or natural gas; or for storage of hydrocarbons that are liquid at standard temperature and pressure.

"Class III Injection Well" means a well used for extraction of minerals, including but not limited to the injection of fluids for: In-situ production of uranium or other metals that have not been conventionally mined; Mining of sulfur by Frasch process; or Solution mining of salts or potash.

"Class IV Injection Wells" means a well used to inject dangerous or radioactive waste fluids.

"Class V Injection Wells" means all injection wells not included in Classes I, II, III, or IV.

"Classification" means defining value and hazard categories to which critical areas and natural resource lands will be assigned.

"Clearing" means the cutting, moving on site, or removal of standing or fallen timber; the removal or moving on site of stumps; or the cutting or removal of brush, grass, ground cover, or other vegetative matter from a site in a way which exposes the earth's surface of the site. In addition to the above, clearing is an activity which does not require reforestation per an approved Forest Practices Application/notification issued by the Department of Natural Resources.

"Cliff" means a steep vertical or overhanging face of rock or earth greater than 25 feet in height.

"Compensatory mitigation" means mitigation to compensate for loss of wetland habitat due to filling of wetlands or other regulated activities in wetlands.

"Confined aquifer" means an aquifer bounded above and below by beds of distinctly lower permeability than that of the aquifer itself and that contains ground water under sufficient pressure for the water to rise above the top of the aquifer.

"Confining Formation" means the relatively impermeable formation immediately overlying an artesian aquifer.

"Contaminant" means any chemical, physical, biological, or radiological substance that does not occur naturally or occurs at concentrations and duration as to be injurious to human health or welfare or shown to be ecologically damaging.

"Critical Aquifer Recharge Area" means areas that are determined to have a critical recharging effect on aquifers used as a source for potable water, and are vulnerable to contamination from recharge.

"Critical areas" means wetlands, flood hazard areas, fish and wildlife habitat areas, aquifer recharge areas, and geologically hazardous areas as defined in this chapter.

"Critical facilities" means those facilities occupied by populations or which handle dangerous substances including but not limited to hospitals, medical facilities; structures housing, supporting or containing toxic or explosive substances; covered public assembly structures; school buildings through secondary including day-care centers; buildings for colleges or adult education; jails and detention facilities; and all structures with occupancy of greater than 5,000 people.

"Degraded" means to have suffered a decrease in naturally occurring functions and values due to activities undertaken or managed by persons, on or off a site.

"Delineation" means identification of wetlands and their boundaries done in accordance with the approved federal wetland delineation manual and applicable regional supplements. ~~a wetland~~

~~study conducted in accordance with the most current Federal Manual for Identifying and Delineating Jurisdictional Wetlands, 1989 edition (Unified Federal Manual) and the most current Washington State Wetlands Identification and Delineation Manual, March 1997 Edition (DOE Publication 96-94)~~.

"Delineation report" means a written document prepared by a wetland specialist which includes data sheets, findings of the delineation and a site plan which identifies the wetland boundaries.

"Department" means the City of Lakewood Department of Community Development.

"Designation" means taking formal legislative and/or administrative action to adopt classifications, inventories, and regulations.

"Developed Lot" means any lot developed with a primary use and structure(s), not generally subject to further development with additional units or other primary uses.

"Development" means any human-induced change to improved or unimproved real property including, but not limited to, the construction of buildings or other structures, placement of manufactured home/mobile, mining, dredging, clearing, filling, grading, paving, excavation, drilling operations, storage of equipment or materials, ~~or the~~ subdivision of property, removal of substantial amounts of vegetation, or alteration of natural site characteristics.

"Director" means the Director of the Department of Community Development or his/her designee.

"DRASTIC" means a model developed by the National Water Well Association and Environmental Protection Agency used to measure aquifer susceptibility.

"Dry Floodproofing" means any combination of structural and non-structural measures that prevent flood waters from entering a strtucture.

"Ecotone" means a transition area between two adjacent vegetation communities.

"Elevation Certificate" means the official form (FEMA form 81-31) used to provide elevation information necessary to ensure compliance with provisions of this ordinance and determine the proper flood insurance premium rate.

"Erosion" means the wearing away of the earth's surface as a result of the movement of wind, water, or ice.

"Erosion hazard areas" means those areas that because of natural characteristics, including vegetative cover, soil texture, slope, gradient, and rainfall patterns, or human-induced changes to such characteristics, are vulnerable to erosion.

"Earth/earth material" means naturally occurring rock, soil, stone, sediment, or combination thereof.

"Enhancement" means actions performed to improve the condition of existing degraded wetlands and/or buffers so that the quality of wetland functions increases (e.g., increasing plant diversity, increasing wildlife habitat, installing environmentally compatible erosion controls, removing non-indigenous plant or animal species, removing fill material or solid waste).

"Excavation" means the mechanical removal of earth material.

"Existing" means those uses legally established prior to incorporation whether conforming or nonconforming.

"Extirpation" means the elimination of a species from a portion of its original geographic range.

"Fill/fill material" means a deposit of earth material, placed by human or mechanical means.

"Filling" means the act of placing fill material on any surface, including temporary stockpiling of fill material.

"Fish and wildlife habitat areas" means those areas identified as being of critical importance to maintenance of fish, wildlife, and plant species, including: areas with which endangered, threatened, and sensitive species have a primary association; habitats and species of local importance; naturally occurring ponds under twenty acres and their submerged aquatic beds that provide fish or wildlife habitat; waters of the state; lakes, ponds, streams, and rivers planted with game fish by a governmental or tribal entity, or private organization; state natural area preserves and natural resource conservation areas.

"Fisheries biologist" means a professional with a degree in fisheries, or certification by the American Fisheries Society, or with five years professional experience as a fisheries biologist.

"Flood or Flooding" means a general and temporary condition of partial or complete inundation of normally dry land areas from:

1. The overflow of inland or tidal waters, and/or

2. The unusual and rapid accumulation of runoff of surface waters from any source.

"Floodfringe" means the area subject to inundation by the base flood, but outside the limits of the floodway, and which may provide needed temporary storage capacity for flood waters.

"Flood hazard areas" means areas of land located in floodplains which are subject to a one percent or greater chance of flooding in any given year. These areas include, but are not limited to, streams, rivers, lakes, coastal areas, wetlands, and the like.

"Flood Insurance Rate Map (FIRM)" means the official map on which the Federal Emergency Management Agency has delineated both the Special Flood Hazard Areas and the risk premium zones applicable to the community.

"Floodplain" means the total area subject to inundation by the base flood, including the floodfringe and the floodway areas.

"Flood Protection Elevation" (FPE) means the elevation above the datum of the effective FIRM to which new and substantially improved structures must be protected from flood damage.

"Floodway" means the channel of a river, or other watercourse, and the land areas that must be reserved in order to convey and discharge the base flood without cumulatively increasing the water surface elevation by more than one foot, and those areas designated as deep and/or fast-flowing water.

"Geological assessment" means an assessment prepared by a professional engineer licensed by the State of Washington with expertise in geotechnical engineering or prepared by a professional geologist, hydrologist, or soils scientist, who has earned the related bachelor's degree from an accredited college or university, or equivalent educational training, and has a minimum of five (5) years experience assessing the relevant geologic hazard. A geological assessment must detail the surface and subsurface conditions of a site and delineate the areas of a property that might be subject to specified geologic hazards.

"Geologically hazardous areas" means areas that because of their susceptibility to erosion, sliding, earthquake, or other geological events, may pose a risk to the siting commercial, residential, or industrial development consistent with public health or safety concerns.

"Geotechnical report" means a report prepared by a professional engineer licensed by the State of Washington with expertise in geotechnical engineering, evaluating the site conditions and mitigating measures necessary to reduce the risks associated with development in geologically hazardous areas.

"Grading" means any excavating, filling, clearing, creating (or combination thereof) of impervious surfaces.

"Ground amplification" means an increase in the intensity of earthquake induced ground shaking which occurs at a site whereby thick deposits of unconsolidated soil or surficial geologic materials are present.

"Groundwater" means all water found beneath the ground surface, including slowly-moving subsurface water present in aquifers and recharge areas.

"Groundwater Management Area" means a specific geographic area or subarea designated pursuant to Chapter 173-100 WAC for which a ground water management program is required.

"Groundwater management program" means a comprehensive program designed to protect ground water quality, to assure ground water quantity, and to provide for efficient management of water resources while recognizing existing ground water rights and meeting future needs consistent with local and state objectives, policies and authorities within a designated ground water management area or subarea and developed pursuant to Chapter 173-100 WAC.

"Habitat assessment" means a report prepared by a professional wildlife biologist or fisheries biologist, which identifies the presence of fish and wildlife habitat conservation areas in the vicinity of the proposed development site.

"Habitat management plan" means a report prepared by a professional wildlife biologist or fisheries biologist, which discusses and evaluates the measures necessary to maintain fish and wildlife habitat conservation areas on a proposed development site.

"Habitat of local importance" means an area, range or habitat within which a species has a primary association and which, if altered, may reduce the likelihood that the species will maintain and reproduce over the long-term. Examples include areas of high relative density or species richness, breeding habitat, winter range, and movement corridors. These areas may also include habitats that are of limited availability or high vulnerability to alteration. The Lakewood City Council may designate specific Habitats of Local Importance by ordinance or resolution.

"Hazardous Substance(s)" means any liquid, solid, gas, or sludge, including any materials, substance, product, commodity, or waste, regardless of quantity, that exhibits any of the physical, chemical or biological properties described in Chapter 173-303-090 or 173-303-100 WAC.

"Hazardous Substance Processing or Handling" means the use, storage, manufacture, or other land use activity involving hazardous substances, but does not include individually packaged household consumer products or quantities of hazardous substances of less than five (5) gallons in volume per container. Hazardous substances shall not be disposed on-site unless in compliance with Dangerous Waste Regulations, Ch. 173-303 WAC, and any pertinent local ordinances, such as sewer discharge standards.

"Hazardous waste" means and includes all dangerous waste and extremely hazardous waste as designated pursuant to Chapter 70.105 RCW and Chapter 173-303 WAC.

1. "Dangerous waste" means any discarded, useless, unwanted, or abandoned substances including, but not limited to, certain pesticides, or any residues or containers of such substances which are disposed of in such quantity or concentration as to pose a substantial present or potential hazard to human health, wildlife, or the environment because such wastes or constituents or combinations of such wastes:

a. Have short-lived, toxic properties that may cause death, injury, or illness or have mutagenic, teratogenic, or carcinogenic properties; or

b. Are corrosive, explosive, flammable, or may generate pressure through decomposition or other means.

2. "Extremely hazardous waste" means any waste which:

c. Will persist in a hazardous form for several years or more at a disposal site and which in its persistent form presents a significant environmental hazard and may be concentrated by living organisms through a food chain or may affect the genetic make-up of humans or wildlife, and

d. Is disposed of at a disposal site in such quantities as would present an extreme hazard to humans or the environment.

"Hazardous Waste Treatment and Storage Facility" means a facility that treats and stores hazardous waste and is authorized pursuant to Ch. 70.105 RCW, Ch. 173-303 WAC. It includes all contiguous land and structures used for recycling, reusing, reclaiming, transferring, storing, treating, or disposing of hazardous waste. Treatment includes using physical, chemical, or biological processing of hazardous wastes to make such waste non-dangerous or less dangerous and safer for transport, amenable for energy or material resource recovery. Storage includes the holding of waste for a temporary period but not the accumulation of waste on the site of generation as long as the storage complies with applicable requirements of Ch. 173-303 WAC.

<u>"Historic Structure" means a structure that:</u>

<u>A. Is listed on the National Register of Historic Places, the Washington Heritage Register, or the Washington Heritage Barn Register, or</u>

<u>B. Has been certified to contribute to the historical significance of a registered historic district.</u>

"Hydrologically isolated wetland" means a wetland which:

1. Is not contiguous to any 100-year floodplain of a lake, river or stream; and
2. Has no contiguous surface hydrology, hydric soil or hydrophytic vegetation between the wetland and any other wetland or stream system.

"Hydrogeologic Assessment" means a report detailing the subsurface conditions of a site and which indicates the susceptibility and potential for contamination of groundwater supplies.

"Hydrologic soil groups" means soils grouped according to their runoff-producing characteristics under similar storm and cover conditions. Properties that influence runoff potential are depth to seasonally high water table, intake rate and permeability after prolonged wetting, and depth to a low permeable layer. Hydrologic soil groups are normally used in equations that estimate runoff from rainfall, but can be used to estimate a rate of water transmission in soil. There are four hydrologic soil groups: A, with low runoff potential and a high rate of water transmission; B with moderate infiltration potential and rate of water transmission; C, with a slow infiltration

potential and rate of water transmission; and D, with a high runoff potential and very slow infiltration and water transmission rates.

"Hyporheic Zone" means a saturated layer of rock or sediment beneath and/or adjacent to a stream channel that contains some proportion of channel water or that has been altered by channel water infiltration.

"Impervious Surface" means natural or human-produced material on the ground that does not allow surface water to penetrate into the soil. Impervious surfaces may consist of buildings, parking areas, driveways, roads, sidewalks, and any other areas of concrete, asphalt, plastic, etc.

"Infiltration" means the downward entry of water into the immediate surface of soil.

"In-kind mitigation" means to replace wetlands with substitute wetlands whose characteristics and functions and values are intended to replicate those destroyed or degraded by a regulated activity.

"Lakes" means impoundments of open water 20 acres or larger in size.

"Landfill" means a disposal facility or part of a facility at which solid waste is permanently placed in or on land and which is not a landspreading disposal facility.

"Landslide" means the abrupt downslope movement of soil, rocks, or other surface matter on a site. Landslides may include, but are not limited to, slumps, mudflows, earthflows, rockfalls, and snow avalanches.

"Landslide hazard areas" means areas which are potentially subject to risk of mass movement due to a combination of geologic, topographic, and hydrologic factors.

"Large Animal" means an animal with an average weight of 100 pounds or more.

"Liquefaction" means a process by which a water-saturated granular (sandy) soil layer loses strength because of ground shaking commonly caused by an earthquake.

"Long-term commercial significance" means the growing capacity, productivity, and soil composition of land which makes it suitable for long-term commercial production, in consideration with the land's proximity to population areas, and the possibility of more intense uses of land.

"Minerals" means gravel, sand, and valuable metallic substances.

"Mineral resource lands" means lands primarily devoted to the extraction of minerals or which have known or potential long-term commercial significance for the extraction of minerals.

"Mitigation" means to avoid, minimize or compensate for adverse environmental impacts. "Mitigation" includes:

(1) Avoiding the impact altogether by not taking a certain action or parts of an action;

(2) Minimizing impacts by limiting the degree or magnitude of the action and its implementation, by using appropriate technology, or by taking affirmative steps to avoid or reduce impacts;

(3) Rectifying the impact by repairing, rehabilitating, or restoring the affected environment;

(4) Reducing or eliminating the impact over time by preservation and maintenance operations during the life of the action;

(5) Compensating for the impact by replacing, enhancing, or providing substitute resources or environments; and/or

(6) Monitoring the impact and taking appropriate corrective measures.

"Natural Floodplain Functions" means the contribution that a floodplain makes to support habitat, including but not limited to providing flood storage and conveyance, reducing flood velocities, reducing sedimentation, filtering nutrients and impurities from runoff, processing organic wastes, moderating temperature fluctuations and providing breeding and feeding grounds for aquatic and riparian species.

"Natural resource lands" means mineral resource lands which have long-term commercial significance.

"New Construction" for flood hazard purposes refers to structures for which the "start of construction" commenced on or after the effective date of this ordinance.

"Oregon White Oak" means the species Quercus Garryana, also known as a Garry Oak. All references to Oak trees in this Chapter refer to Oregon White Oak. See also "Priority Oregon White Oak Woodland."

"Old growth forests" means stands of at least 2 tree species, forming a multi-layered canopy with occasional small openings; with at least 20 trees/ha (8 trees/acre) > 81 cm (32 in) dbh or > 200 years of age; and > 10 snags/ha (4 snags/acre) over 51 cm (20 in) diameter and 4.6 m (15 ft) tall; with numerous downed logs, including 10 logs/ha (4 logs/acre) > 61 cm (24 in) diameter and > 15 m (50 ft) long. High elevation stands (> 762m [2500ft]) may have lesser dbh [> 76 cm (30 in)], fewer snags [> 0.6/ha (1.5/acre)], and fewer large downed logs [0.8 logs/ha (2 logs/acre) that are > 61 cm (24 in) diameter and > 15 m (50 ft) long

"Ordinary high water" means that mark on all lakes, streams, ponds, and tidal water that will be found by examining the bed and banks and ascertaining where the presence and action of water are so common and usual, and so long continued in all ordinary years, as to mark upon the soil a character distinct from that of the abutting upland, in respect to vegetation as that condition exists on the effective date of this Chapter or as it may naturally change thereafter. Provided,

that in any area where the ordinary high water mark cannot be found, the ordinary high water mark adjoining fresh water shall be the mean high water.

"Out-of-kind mitigation" means to replace wetlands with substitute wetlands whose characteristics do not approximate those destroyed or degraded by a regulated activity.

"Perched ground water" means ground water in a saturated zone is separated from the main body of ground water by unsaturated rock.

"Permanent erosion control" means continuous on-site and off-site control measures that are needed to control conveyance and/or deposition of earth, turbidity or pollutants after development, construction, or restoration.

"Permeability" means the capacity of an aquifer or confining bed to transmit water. It is a property of the aquifer and is independent of the force causing movement.

"Permeable Surfaces" mean sand, gravel, and other penetrable deposits on the ground which permit movement of groundwater through the pore spaces, and which permit the movement of fluid to the groundwater.

"Person" means an individual, firm, company, partnership, association, corporation, or other legal entity.

"Ponds" means naturally occurring impoundments of open water less than 20 acres in size and larger than 2,500 square feet which maintain standing water throughout the year.

"Potable water" means water that is safe and palatable for human use.

"Prairies" means open areas predominated by native, drought-resistant, grasses, forbs (flowering non-woody plants) and herbs. In Pierce County, prairies are an unusual vegetation regime found in areas of extremely well-drained soils.

"Priority Oregon White Oak Woodland" means forested areas of pure oak, or of oak/conifer associations 1 acre or larger, and all oak trees located within, where oak canopy coverage of the area is at least 25%. Stands of oaks less than 1 acre in size may also be considered priority habitat when found to be particularly valuable to fish and wildlife (i.e.; they contain many cavities, have a large diameter at breast height (dbh), are used by priority species, or have a large canopy).

"Private organization" means a nonprofit corporation organized pursuant to RCW 24.03, which includes the planting of game fish among its purposes for organizing as a nonprofit corporation.

<u>"Protected Area" means the lands that lie within the boundaries of the floodway, the riparian habitat zone and the channel migration area. Because of the impact that development can have on flood heights and velocities and habitat, special rules apply in the Protected Area.</u>

"Public services" include fire protection and suppression, law enforcement, public health, education, recreation, environmental protection, and other governmental services.

"Qualified ground water scientist" means a hydrogeologist, geologist, engineer, or other scientist who meets all the following criteria:

A. Has received a baccalaureate or post-graduate degree in the natural sciences or engineering; and
B. Has sufficient training and experience in ground water hydrology and related fields as may be demonstrated by state registration, profession certifications, or completion of accredited university programs that enable that individual to make sound professional judgments regarding ground water vulnerability.

"Recharge" means the process involved in the absorption and addition of water to ground water.

"Regolith" means any body of loose, noncemented particles overlying and usually covering the bedrock.

"Restoration" means the re-establishment of a ecological and/or habitat resources and features from a previously disturbed or degraded critical area site.

"Regulated activities" include, but are not limited to, any activities which are directly undertaken or originate in a regulated critical area or resource land or their buffer that require any of the following entitlements from the City: building permit, commercial or residential; binding site plan; boundary line adjustment; conditional use permit; franchise right-of-way construction permit; site development permit; master plan development; right-of-way permit; shoreline conditional use permit; shoreline environmental redesignation; shoreline substantial development permit; shoreline variance; large lot subdivision, short subdivision; special use permit; subdivision; unclassified use permit; utility and other use permit; variance; zone reclassification; or any subsequently adopted permit or required approval not expressly exempted by this Chapter. Regulated activities also include those specific activities listed in Section 14A.142.060.

"Regulatory Floodplain" means the area of the Special Flood Hazard Area and all Protected Areas within the jurisdiction of the City of Lakewood.

"Recessional outwash geologic unit" means sand and gravel materials deposited by melt-water streams from receding glaciers.

"Riparian" means of, adjacent to, or living on, the bank of a river, lake, pond, ocean, sound, or other water body.

"Seismic hazard areas" means areas subject to severe risk of damage as a result of earthquake induced ground shaking, slope failure, settlement, or soil liquefaction.

"Short subdivision" or "short plat" means the division or redivision of land into four or fewer lots, tracts, parcels, sites or divisions for the purpose of sale, lease, or transfer of ownership.

"Site" means a lot, parcel, tract, or combination of lots, parcels, or tracts where a development is proposed.

"Slope" means an inclined earth surface, the inclination of which is expressed as the ratio of horizontal distance to vertical distance.

"Slump" means the downward and outward movement of a mass of bedrock or regolith along a distinct surface of failure.

"Snag-rich areas" means forested areas which contain concentrations of standing dead trees, averaging ten snags or greater per acre, and averaging greater than 15 inches in diameter at breast height.

"Soil Survey" means the most recent National Cooperative Soil Survey for the local area or county by the Soil Conservation Service, United States Department of Agriculture.

"Sole Source Aquifer" means an area designated by the U.S. Environmental Protection Agency under the Safe Drinking Water Act of 1974, Section 1424(e). The aquifer(s) must supply 50% or more of the drinking water for an area without a sufficient replacement available.

"Special Flood Hazard Area (SFHA)" means the land subject to inundation by the base flood. Special Flood Hazard Areas are designated on Flood Insurance Rate Maps with the letters "A" or "V", including AE, AO, AH, A1-99, and VE. The Special Flood Hazard Area is also referred to as the area of special flood hazard or SFHA.

"Species of local importance" means species that are of local concern due to their population status or their sensitivity to habitat manipulation.

"Start of Construction" for flood hazard purposes includes substantial improvements, and means the actual start of construction, repair, reconstruction, rehabilitation, addition, placement or other improvement that occurred before the permit's expiration date. The actual start is either the first placement of permanent construction of a structure on a site, such as the pouring of a slab or footings, the installation of piles, the construction of columns, or any work beyond the stage of excavation; or the placement of a manufactured home on a foundation.

Permanent construction does not include land preparation, such as clearing, grading and filling; nor does it include the excavation for a basement, footing, piers, or foundations or the erection of temporary forms; not does it include the installation on property of accessory structures not occupied as dwelling units or not part 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.

"Stockpiling" means the placement of material with the intent to remove it at a later time.

"Subdivision" or "formal subdivision" means the division or redivision of land into five (5) or more lots, tracts, parcels, sites, or division for the purpose of sale, lease, or transfer of ownership.

"Substantial Damage" for flood hazard purposes 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.

Substantial damage also means flood-related damage sustained by a structure on two separate occasions during a 10-year period for which the cost of repairs at the time of each such flood event, on the average, equals or exceeds 25% of the market value of the structure before the damage occurred.

"Substrate" means the soil, sediment, decomposing organic matter or combination of those located on the bottom surface of a wetland.

"Temporary erosion control" means on-site and off-site control measures that are needed to control conveyance or deposition of earth, turbidity or pollutants during development, construction, or restoration.

"Toe of slope" means a distinct topographic break in slope at the lower-most limit of the landslide or erosion hazard area.

"Top of slope" means a distinct topographic break in slope at the uppermost limit of the landslide or erosion hazard area.

"TPCHD" means the Tacoma-Pierce County Health Department.

"Underground Tank" means any one or a combination of tanks (including underground pipes connected thereto) which are used to contain or dispense an accumulation of hazardous substances or hazardous wastes, and the volume of which (including the volume of underground pipes connected thereto) is ten percent or more beneath the surface of the ground.

"Unconfined aquifer" means an aquifer not bounded above by a bed of distinctly lower permeability than that of the aquifer itself and containing ground water under pressure approximately equal to that of the atmosphere. This term is synonymous with the term "water table aquifer".

"Utility line" means pipe, conduit, cable or other similar facility by which services are conveyed to the public or individual recipients. Such services shall include, but are not limited to, water supply, electric power, gas, communications and sanitary sewers.

"Vadose Zone" is the distance between the land surface and the uppermost aquifer. This distance is also defined as the "depth to water" zone or unsaturated zone.

"View corridor" means an area which affords views of lakes, mountains, or other scenic amenities normally enjoyed by residential property owners.

"Water Typing" means a system for classifying water bodies according to their size and fish habitat characteristics. The Washington Department of Natural Resources" Forest Practices Water Typing classification system defines four water types:

A. Type "S" = Shoreline: Streams that are designated "shorelines of the State," including marine shorelines.

B. Type "F" = Fish: Streams that are known to be used by fish or meet the physical criteria to be potentially used by fish.

C. Type "Np" = Non-Fish Perennial streams.

D. Type "Ns" = Non-Fish Seasonal Streams.

"Wellhead Protection Area" means the surface and subsurface area surrounding a well or well field that supplies a public water systems through which contaminants are likely to pass and eventually reach the water well(s) as designated under the Federal Clean Water Act.

"Water table" means that surface in an unconfined aquifer at which the pressure is atmospheric. It is defined by the levels at which water stands in wells that penetrate the aquifer just far enough to hold standing water.

"Well" means a bored, drilled or driven shaft, or a dug hole whose depth is greater than the largest surface dimension.

"Urban governmental services" include those governmental services historically and typically delivered by cities, and includes storm and sanitary sewer systems, domestic water systems, street cleaning services, and other public utilities associated with urban areas and normally not associated with non-urban areas.

"Urban growth" refers to growth that makes intensive use of the land for the location of buildings, structures, and impermeable surfaces to such a degree as to be incompatible with the primary use of such land for the production of food, other agricultural products, or fiber, or the extraction of mineral resources. When allowed to spread over wide areas, urban growth typically requires urban governmental services. `Characterized by urban growth' refers to land having urban growth located on it, or to land located in relationship to an area with urban growth on it as to be appropriate for urban growth.

"Wetland" or "Wetlands" means areas that are inundated or saturated by surface water or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas. Wetlands generally do not include those artificial wetlands intentionally created from non-wetland sites, including, but not limited to, irrigation and drainage ditches, grass-lined swales, canals, detention facilities, wastewater treatment facilities, farm ponds, and landscape amenities. However,

wetlands may include those artificial wetlands intentionally created from non-wetland areas created to mitigate conversion of wetlands~~, if permitted by the City~~.

"Wetland specialist" means a person with experience and training in wetlands issues, and with experience in performing delineations, analyzing wetland functions and values, analyzing wetland impacts, and recommending wetland mitigation and restoration. Qualifications include:

1. Bachelor of Science or Bachelor of Arts or equivalent degree in biology, botany, environmental studies, fisheries, soil science, wildlife, agriculture or related field, and two years of related work experience, including a minimum of one year experience delineating wetlands using the Unified Federal Manual and preparing wetland reports and mitigation plans. Additional education may substitute for one year of related work experience; or,

2. Four years of related work experience and training, with a minimum of two years experience delineating wetlands using the Unified Federal Manual and preparing wetland reports and mitigation plans.

The person should be familiar with the Federal Manual for Identifying and Delineating Jurisdictional Wetlands, The City Site Development Regulations, The City Wetland Management Policies, and the requirements of this Chapter.

"Wildlife biologist" means a professional with a degree in wildlife, or certification by The Wildlife Society, or with five years professional experience as a wildlife biologist.

Section 12: Section 18A.40.110 LMC entitled "Purpose – Floor Hazard Overlay" is amended to read as follows:

The Flood Hazard overlay (FHO) is intended to identify and recognize those areas of the city subject to the hazards of periodic flooding and to establish special standards and regulations to guide development and reduce personal injury, property damage and loss of life from flooding in those areas. This overlay shall apply to all areas of special flood hazards within the incorporated areas of the City of Lakewood as identified on Flood Insurance Rate Maps, Flood Boundary Maps, and Floodway Maps. In advancing these principles and the general purposes of the comprehensive plan, the specific objectives are to:

A. Promote the general health, welfare and safety of the city's residents, and protect human life, and property from the dangers of flooding.

B. Prevent the establishment of certain structures and land uses unsuitable for human habitation because of the danger of flooding, unsanitary conditions or other hazards.

C. Minimize the need for rescue and relief efforts associated with flooding.

D. Help maintain a stable tax base by providing for sound use and development in flood-prone areas and to minimize prolonged business interruptions, and future flood blight areas.

E. Minimize damage to public facilities and utilities located in flood hazard areas.

F. Ensure that potential home and business buyers are notified that property is in a flood area.

G. Minimize expenditure of public money for costly flood relief, damage repair and flood control projects.

H. Ensure that those who occupy the areas of special flood hazard assume responsibility for their actions.

I. Qualify the City of Lakewood for participation in the National Flood Insurance Program, thereby giving citizens and businesses the opportunity to purchase flood insurance.

J. Maintain the quality of water in rivers, streams, and lakes and their floodplains so as to protect public water supplies, areas of the Public Trust, and wildlife habitat protected by the Federal Endangered Species Act.

K. Retain the natural channel, shoreline, and floodplain creation processes and other natural floodplain functions that protect, create, and maintain habitat for threatened and endangered species.

L. Prevent or minimize loss of hydraulic, geomorphic, and ecological functions of floodplains and stream channels.

Section 13: Section 18A.40.120 LMC entitled "Applicablity – Flood Hazard Overlay" is amended to read as follows:

A. Establishment of Flood Zones. This section shall apply to t~~T~~he areas of special flood hazard identified by the Federal Emergency Management Agency (FEMA) in a scientific engineering report entitled "The Flood Insurance Study for the Unincorporated Areas of Pierce County, WA, Vols. 1 and 2," dated August 19, 1987, as amended with an accompanying Flood Insurance Rate Map (FIRM) and Flood Boundary Maps, and any revisions thereto, and all Protected Areas within the City are hereby adopted by reference and declared to be a part of this section. The Flood Insurance Study shall be kept on file by the City Engineer. The best available information for flood hazard area identification, as outlined in this section, shall be the basis for regulation until a new FIRM is issued which incorporates the data utilized in administration of this section.

B. Noncompliance. No structure or land shall hereafter be developed, converted, altered, constructed, or located without full compliance with the terms of this section and other applicable regulations. Violations of the provisions of this section are subject to the penalties identified in this title.

C. Abrogation and Greater Restrictions. This section is not intended to repeal, abrogate, or impair any existing easements, covenants, or deed restrictions. However, where this section and other code, easement, covenant, or deed restriction conflict or overlap, whichever imposes the more stringent restrictions shall prevail.

D. Interpretation of FIRM Boundaries. The Community Development Director shall make interpretations where needed, as to the exact location of the boundaries of the areas of special flood hazards. In the interpretation and application of this section, all provisions shall be:

1. Considered to constitute minimum requirements.
2. Liberally construed in favor of the public trust.
3. Deemed neither to limit nor repeal any other powers granted under state statutes. A party contesting the location of the boundary shall be given a reasonable opportunity to appeal the interpretations as provided in this code.

E. Disclaimer of Liability. The degree of flood protection required by this section is considered reasonable for regulatory purposes and is based on scientific and engineering considerations. Larger floods can and will occur on occasion. Flood heights may be increased by man-made or natural causes. This section 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 section shall not create liability on the part of the City of Lakewood, or any officer or employee thereof, or FEMA for any flood damages that result from reliance on this section or any administrative decision lawfully made hereunder.

Section 14: Section 18A.40.130 LMC entitled "Administration – Flood Hazard Overlay" is amended to read as follows:

A. Establishment of Building Permit and Land-Use Permit. A building permit and zoning certification shall be required in conformance with the provisions of this section for all structures including manufactured homes and all other development including fill and other activities. ~~Application for a building, land-use, or grading permit shall be made to the City on forms prescribed by the City, which shall specifically include the following information:~~

A certificate of occupancy or final inspection approval for a new or substantially improved structure or an addition shall not be issued until:

1. The applicant provides a completed, signed and sealed Elevation or Floodproofing Certificate showing finished construction data in accordance with this ordinance.
2. If a mitigation plan is required, all work identified in the plan has been completed according to the plan's schedule.
3. The applicant provides copies of all required Federal, State and local permits as noted in the application.
4. All provisions of this ordinance have been met.

~~1. Elevation in relation to mean sea level, of the lowest floor, including basement, of all structures.~~
~~2. Elevation in relation to mean sea level to which any non-residential structure that has been floodproofed.~~
~~3. Certification by a registered professional engineer or architect that any non-residential floodproofed structure meets the floodproofing criteria in LMC 18A.40.170.B.2,~~

~~Provisions for Flood Hazard Reduction, Specific Standards.~~
~~4. Description of the extent to which any water course will be altred or relocated as a result of proposed development.~~

B. A floodplain development permit shall be obtained before any construction or development begins within the Regulatory Floodplain. Application for a floodplain development permit shall be made on forms prescribed by the City and shall include:

1. A site plan, drawn to scale, showing:

a. The nature, location, dimensions and elevations of the property in question.
b. Names and location of all lakes, water bodies, water ways and drainage facilities within 300 feet of the site.
c. The elevations of the 10, 50, 100 and 500 year floods, where the data are available.
d. The boundaries of the Regulatory Floodplain, SFHA, floodway, riparian habitat zone, and channel migration area delineated in accordance with the provisions of this ordinance.
e. The proposed drainage system including, but not limited to, storm sewers, overland flow paths, detention facilities and roads.
f. Existing and proposed structures, fill, pavement and other impervious surfaces, and sites for storage of materials.
g. All wetlands.
h. Designated fish and wildlife habitat conservation areas.
i. Existing vegetation and proposed vegetation.
j. Description of the extent to which any water course will be altered or relocated as a result of proposed development.

2. If the proposed project involves regrading, excavation or filling, the site plan shall include proposed post-development terrain at one foot contour intervals.

3. If the proposed project includes a new structure, substantial improvement, or repairs to a substantially damaged structure that will be elevated, the application shall include the flood protection elevation (FPE) for the building and site and the proposed elevations of the following:

a. The top of bottom floor (including basement, crawlspace or enclosure floor)
b. The top of the next higher floor.
c. The top of the slab of an attached garage.
d. The lowest elevation of machinery or equipment servicing the structure.
e. The lowest adjacent (finished) grade next to the structure.
f. The highest adjacent (finished) grade next to structure.
g. The lowest adjacent grade at the lowest elevation of a deck or stairs, including structural support.

4. If the proposed project includes dry floodproofing of a new structure, substantial improvement, or repairs to a substantially damaged nonresidential structure, the application shall include the flood protection elevation (FPE) for the building site. The elevation shall be noted in relation to the datum of the effective FIRM and the applicant shall provide certification by a registered professional engineer or licensed architect that the dry floodproofing methods meet the criteria in accordance with this ordinance.

5. If there has been no start of construction, a floodplain development permit shall expire one year after the date of issuance. Where the applicant documents a need for an extension beyond this period due to circumstances beyond the applicant's control, the Community Development Director may authorize one or more extensions.

~~B~~C. Administrative Officials. The Community Development Director, the City Engineer and the Building Official shall jointly administer and implement this section by granting or denying permit applications in accordance with its provisions.

~~C~~D. Duties and Responsibilities. The duties of the administrative officials shall include, but not be limited to the following:

1. Review all permit and land-use applications to determine that the requirements of this section have been satisfied.

2. Review all applications to insure that all necessary permits have been obtained from those federal, state or local governmental agencies from which prior approval is required.

3. Review all applications in the area of special flood hazard to determine if the proposed development adversely affects the flood-carrying capacity of the area.

4. Review all applications to determine if the proposed development is located in the ~~floodway~~ special flood hazard area or protected area ~~If located in the floodway, assure that the encroachment provisions herein are met.~~ and ensure that the provisions of this ordinance are met.

~~D~~E. Use of Other Base Flood Data. When base flood elevation data has not been established, the City shall obtain, review, and reasonably utilize any base flood elevation and floodway data available from a federal, state, or other source, as criteria for requiring that new construction, substantial improvements, or other development in Zone A comply with LMC 18A.40.170.B.1, Residential Construction, LMC 18A.40.170.B.2, Non-Residential Construction, and LMC 18A.40.170.B.3, Manufactured Homes.

~~E~~F. Information to be Obtained and Maintained.

1. Where base flood elevation data is provided by FEMA or required by this section, obtain and record the actual 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 flood-proofed structures:

a. Verify and record the actual elevation (in relation to mean sea level) to which the structure was floodproofed; and
b. Maintain the flood-proofing certifications required in LMC 18A.40.170, Provisions For Flood Hazard Reduction.

3. Maintain for public inspection all records pertaining to the provisions of this section.

4. The Floodplain Administrator shall submit reports to include the projects for which they issue floodplain development permits, including effects to flood storage, fish habitat and all indirect effects of development and mitigation provided, to FEMA as required for the National Flood Insurance Program.

Section 15: Section 18A.40.140 LMC entitled "alteration of Watercourses – Flood Hazard Overlay" is amended to read as follows:

A. The floodplain administrator shall ~~N~~ notify adjacent jurisdictions and the state Department of Ecology or successor agency prior to any alteration or relocation of a watercourse, and submit evidence of such notification to FEMA.

B. Require that maintenance be provided within the altered or relocated portion of said watercourse so that the flood carrying capacity is not diminished. If the maintenance program does not call for cutting of native vegetation, the system shall be oversized at the time of construction to compensate for said vegetation growth or any other natural factor that may need future maintenance.

C. An applicant for a project that will alter or relocate a watercourse shall submit a request for a Conditional Letter of Map Revision (CLOMR) where required by FEMA. The City shall not grant any permit unless FEMA issues the CLOMR and the provisions of the letter are made a part of the permit requirements.

Section 16: Section 18A.40.150 LMC entitled "Interpretation of FIRM Boundaries" is amended to read as follows:

A. The City Engineer shall interpret the exact location of the boundaries of the areas of special flood hazard, where there appears to be a conflict between a mapped boundary and actual field conditions.

B. Any person contesting a flood area boundary may appeal the interpretation as provided in this title.

C. An appeal of the location of a flood area boundary shall consider all technical evaluations, all relevant factors, standards specified in other sections of this title, and:

1. The danger that material may be swept onto other lands to the injury of others.
2. The danger potential to 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 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 flood waters and the effects of wave action, if applicable, expected at the site.
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, water systems, streets and bridges.

D. The City may attach such conditions to the granting of variances hereunder as deemed necessary to further the purposes of this section.

E. The City shall maintain records of all appeal actions and report any variances to FEMA upon request.

F. All requests to FEMA to revise or change the flood hazard data, including requests for a Letter of Map Revision and a Conditional Letter of Map Revision shall be reviewed by the Administrative Officials prior to submittal to FEMA.

1. The Administrative Officials shall not sign any Community Acknowledgment Form for any requests based on filling or other development, unless the applicant for the letter documents that such filling or development is in compliance with this ordinance.

2. The Administrative Officials shall not approve a request to revise or change a floodway delineation until FEMA has issued a Conditional Letter of Map Revision that approves the change.

G. If an applicant disagrees with the regulatory data prescribed by this ordinance, he/she may submit a detailed technical study needed to replace existing data with better data in accordance with FEMA mapping guidelines. If the data in question are shown on the published FIRM, the submittal must also include a request to FEMA for a Conditional Letter of Map Revision.

H. All new hydrologic and hydraulic flood studies conducted pursuant to this section shall consider future conditions and the cumulative effects from anticipated future land use changes.

This review shall be in accordance with Regional Guidance for Hydrologic and Hydraulic Studies in Support of the Model Ordinance for Floodplain Management under the National Flood Insurance Program and the Endangered Species Act, FEMA Region X, 2012.

Section 17: Section 18A.40.160 LMC entitled "Variances – Flood Hazard Overlay" is amended to read as follows:

A. 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.

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

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

D. 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, or conflict with existing local laws or ordinances.

E. Any applicant to whom a variance is granted shall be given written notice of the required lowest floor elevation stated in feet below the base flood elevation ~~and~~. Applicants shall be made aware that the cost of flood insurance will be commensurate with the risk resulting from the reduced lowest flood elevation.

F. Variance Time Limit. Authorization of a variance shall be void after six (6) months unless the new construction, substantial improvement or approved activity has taken place. However, the Community Development Director may, at his discretion, extend authorization for one (1) additional six (6) month period upon request.

Section 18: Section 18A.40.170 LMC entitled "Provision for Flood Hazard Reduction" is amended to read as follows:

A. General Standards. In all areas of special flood hazards, the following standards shall apply for all new construction and substantial improvements, or other development:

1. Anchoring.

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

b. All manufactured homes must be anchored to prevent flotation, collapse, or lateral movement by providing over-the-top and frame ties to ground anchors. Specific requirements shall be that:

(1) Over-the-top ties provided at each end of the manufactured home, with two (2) additional ties per side at intermediate locations and manufactured homes less than fifty (50) feet long requiring one (1) additional tie per side.

(2) Frame ties be provided at each corner of the home with five (5) additional ties per side at intermediate points and manufactured homes less than fifty (50) feet long requiring four (4) additional ties per side.

(3) All components of the anchoring system be capable of carrying a force of four thousand eight hundred (4,800) pounds; and

(4) Additions to the manufactured home shall be similarly anchored.

c. An alternative method of anchoring may involve a system designed to withstand a wind force of ninety (90) miles per hour or greater. Certification <u>by a registered architect or engineer</u> must be provided to the Building Official that this standard has been met.

2. 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.

3. Utilities.

a. All new and replacement water supply systems shall be designed to minimize or eliminate infiltration of flood waters into the system;

<u>b. Water wells shall be located on high ground that is not in the floodway.</u>

<u>c</u>. New and replacement sanitary sewage systems shall be designed to minimize or eliminate infiltration of flood waters into the systems and discharge from the systems into flood waters; and

d. On-site waste disposal systems shall be located to avoid impairment to them or contamination from them during flooding.

4. Use of Openings in Enclosures Below a Structure's Lowest Floor. All new construction and substantial improvements, which have fully enclosed areas below the lowest floor that are subject to flooding, shall be designed to automatically equalize hydrostatic flood forces on exterior walls by allowing for the entry and exit of floodwaters in those areas. Designs for meeting this requirement must either be certified by a registered professional engineer or architect or must meet or exceed the following minimum criteria: A minimum of two (2) openings having a total net area of not less than one (1) square inch for every square foot of enclosed area subject to flooding shall be provided. The bottom of all openings shall be no higher than one (1) foot above grade. Openings may be equipped with screens, louvers, or other coverings or devices provided that they permit the automatic entry and exit of floodwaters.

5. Subdivision Proposals.

a. All subdivision proposals shall be consistent with the need to minimize flood damage.

b. All public utilities and facilities serving subdivision proposals, such as sewer, gas, electrical, and water systems, shall be located and constructed to minimize flood damage.

c. All subdivision proposals shall have adequate drainage provided to reduce exposure to flood damage.

d. Base flood elevation data shall be provided for subdivision proposals and other proposed developments that contain more than fifty (50) lots or five (5) acres, whichever is less.

e. The final recorded subdivision plat shall include a notice that part of the property is in the SFHA, riparian habitat zone and/or channel migration area, as appropriate.

6. Review of Building Permits. Where elevation data is not available either through Flood Insurance Study or from another authoritative source, applications for building and land use permits shall be reviewed to assure that proposed construction will be reasonable 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 (2) feet above grade in these zones may result in higher insurance rates.

7. Encroachments. It must be demonstrated that the cumulative effect of any proposed development, where combined with all other existing and anticipated development, shall

not increase the water surface elevation of the base flood more than one (1) foot at any point.

B. Specific Standards. In all areas of special flood hazards the following provisions apply:

1. Residential Construction. New construction and substantial improvement of any residential structure shall elevate the lowest floor, including basement, at least one (1) foot above the base flood elevation.

2. Non-Residential Construction. New construction and substantial improvement of any commercial, industrial or other non-residential structure shall either elevate the lowest floor, including basement, at least one (1) foot above the base flood elevation or, together with attendant utility and sanitary facilities, shall:

a. Be flood-proofed so that below one (1) foot above the base flood level the structure is watertight, with walls substantially impermeable to the passage of water.

b. Have structural components capable of resisting hydrostatic and hydrodynamic loads and effects of buoyancy.

c. Be certified by a registered professional engineer or architect that the design and methods of construction are in accordance with the standards of this subsection. Such certification shall be provided to the City for review and approval.

d. Non-residential structures that are elevated and are not flood-proofed must meet the same standards for space below the lowest floor as described in this section.

e. Applicants flood-proofing non-residential buildings shall be advised that flood insurance premiums will be based on rates that are one (1) foot below the flood-proofed level (e.g., a building flood-proofed to the base flood level will be rated as one (1) foot below).

3. Manufactured Homes. All manufactured homes to be placed or substantially improved within Zones A1-A30, AH, and AE shall be elevated on a permanent foundation such that the lowest floor of the manufactured home is elevated at least one (1) foot above the base flood elevation.

a. Manufactured homes shall be securely anchored to an adequately anchored foundation system so that:

(1) The lowest floor of the manufactured home is elevated at least one (1) foot above the base flood elevation; or

(2) The manufactured home chassis is supported by reinforced piers or other foundation elements of at least equivalent strength

that are no less than thirty-six (36) inches in height above grade and be securely anchored to an adequately designed foundation system to resist flotation, collapse, and lateral movement.

b. New manufactured home parks and subdivisions. The following provisions apply for expansions to existing manufactured home parks and subdivisions. They also apply to ~~or for~~ existing manufactured home parks and subdivision where the repair, reconstruction or improvement of the streets, utilities and pads equals or exceeds fifty (50) percent of the value of the streets, utilities and pads before repair, reconstruction or improvement has commen~~d~~ ced~~; and for~~ The same provisions apply to manufactured homes not placed in a manufactured home park or subdivision:

(1) Pads or lots are elevated on compacted fill to or above the base flood level (insurance can be waived).

(2) Stands or lots are elevated on compacted fill or on pilings so that the lowest floor of the mobile home will be at or above the base level (insurance required).

(3) Adequate surface drainage and access for hauler are provided; and

(4) In the instance of elevation on piers or pilings where:
(a) lots are large enough to permit steps.
(b) pier and piling foundations are placed in stable soil no more than ten (10) feet apart.
(c) reinforcement is provided for piers and pilings more than six (6) feet above the ground level.

4. Accessory Structures and Uses.

a. New construction and substantial improvement of residential accessory structures in special flood hazard areas are not subject to the requirements of this section, provided that:

(1) The floor area of all floors of the accessory structure totals one thousand (1,000) square feet or less.
(2) The accessory structure shall not be used for human habitation.
(3) The accessory structure shall be designed to have low flood damage potential.
(4) The accessory structure shall be constructed and placed on the building site so as to offer the minimum resistance to the flow of floodwaters.
(5) The accessory structure shall be firmly anchored to prevent

flotation that may result in damage to other structures.
(6) All service facilities, such as electrical and heating equipment associated with the accessory structure, shall be elevated or floodproofed.

b. If it is determined that the accessory structure may cause significant flood risk, all requirements of this section shall be satisfied.

c. When accessory structures built under the provisions of this section exceed a value greater than ten (10) percent of the value of the principal residential structure, substantial increases in insurance rates may result.

5. Critical Facilities. Construction of new critical facilities shall be, to the greatest extent possible, located outside the limits of the special flood hazard area. Construction of new critical facilities shall be permissible within the one hundred (100) year floodplain if no feasible alternative site is available. Critical facilities constructed within the one hundred (100) year floodplain shall have the lowest floor elevated three (3) feet or more above the level of the one hundred (100) year base flood elevation at the site. Flood-proofing and sealing measures must be taken to ensure that toxic substances will not be displaced by or released into floodwaters. All access routes to critical facilities shall be elevated to at least one (1) foot above the base flood elevation, to the greatest extent possible.

6. Floodways. The floodway is an extremely hazardous area due to the velocity of floodwaters that carry debris, potential projectiles, and erosion potential. The following provisions apply:

a. Encroachments, including fill, new construction, substantial improvements, and other development, shall be prohibited, except for:
(1) Repairs, reconstruction, or improvements to a structure which do not increase the ground floor area.
(2) Repairs, reconstruction or improvements to a structure, the cost of which does not exceed fifty (50) percent of the fair market value of the structure either before the repair, or reconstruction is started, or if the structure has been damaged, and is being restored, before the damage occurred.
(3) 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.
(4) Any alteration of a structure listed on the National Register of Historic Places or a State Inventory of Historic Places <u>that do not increase the building's dimensions</u>.
~~(5) New construction or substantial improvements which has been certified by a registered professional engineer demonstrating that encroachments will not result in any increase in flood levels during the occurrence of the base flood discharge.~~

(5) Repairs, replacement, reconstruction or improvements to existing farmhouses located in designated floodways and on designated agricultural lands that do not increase the building's total square footage of encroachment and are consistent with all requirements of WAC 173-158-075.
(6) Repairs, replacement, reconstruction or improvements to substantially damaged residential dwellings other than farmhouses that do not increase the building's total square footage of encroachment and are consistent with all requirements of WAC 173-158-075.
(7) Prior to the repair or replacement of a substantially damaged residential structure located within a floodway a recommendation shall be obtained from the Washington Department of Ecology in accordance with WAC 173-158-076.
(8) The applicant shall provide a certification by a registered professional engineer demonstrating through hydrologic and hydraulic analyses performed in accordance with standard engineering practice that the proposed development would not result in any increase in flood levels during the occurrence of the base flood discharge.

b. All new construction and substantial improvements permitted pursuant to LMC 18A.40.170.B.6(a), Specific Standards, Floodways., shall comply with all applicable flood hazard reduction provisions of LMC 18A.40.170.B, Provisions For Flood Hazard Reduction, Specific Standards.

c. 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.

7. Shallow Flooding Areas (AO Zones). Shallow flooding areas appear on FIRM as AO zones with depth designations. The base flood depths in these zones range from one (1) to three (3) feet above ground where a clearly defined channel does not exist, or where the path of flooding is unpredictable and where velocity flow may be evident. Such flooding is usually characterized as sheet flow. In all areas of special flood hazards designated as areas of shallow flooding, the following provisions shall apply:

a. All new construction and substantial improvements of residential structures and manufactured homes shall have the lowest floor, including the basement, elevated one (1) foot above the highest grade adjacent to the building site or above the depth number specified on the FIRM; at least two (2) feet if no depth number is specified.

b. All new construction and substantial improvements of non-residential structures shall:

(1) Have the lowest floor, including basement, elevated one (1) foot above the highest adjacent grade of the building site or above the depth number specified on the FIRM, at least two (2) feet if no depth number is specified, or;
(2) Together with attendant utility and sanitary facilities, be completely flood proofed to or above that level so that any space below that level is watertight with walls substantially impermeable to the passage of water and with structural components having the capability of resisting hydrostatic and hydrodynamic loads and effects of buoyancy. If this method is used, compliance shall be certified by a registered professional engineer or architect.

c. Require adequate drainage paths around structures on slopes to guide floodwaters around and away from proposed structures.

8. Recreational Vehicle (RV) Parks.

a. All new RV park proposals shall be consistent with the need to minimize flood damage.

b. All public utilities and facilities serving RV parks, such as sewer, electrical, and water systems, shall be located and constructed to minimize flood damage.

c. All RV park proposals shall have adequate drainage provided to reduce exposure to flood damage.

d. Base flood elevation data shall be provided for any RV park that is five (5) acres or greater in size.

e. Recreational vehicles placed on sites shall be on the site for fewer than 180 consecutive days. To be allowed for longer periods recreational vehicles must be fully licensed and ready for highway use, on their wheels or jacking system, attached to the site only by quick disconnect type utilities and security devices, and have no permanently attached additions; or meet the requirements of Section 18A.40.170.B.3.

9. Site Design

A. Structures and other development shall be located to avoid flood damage.

1. If a lot has a buildable site out of the Regulatory Floodplain, all new structures shall be located in that area.

2. If a lot does not have a buildable site out of the Regulatory Floodplain, all new structures, pavement and other development must be sited in the location that has the least impact on habitat by locating the structures as far from the water body as possible or placing the structures on the highest land and lot.

3. A minimum setback of 15 feet from the Protected Area shall be required for all structures.

B. All new development shall be designed and located to minimize the impact on flood flows, flood storage, water quality and habitat.

1. Stormwater and drainage features shall incorporate low impact development techniques that mimic pre-development hydrologic conditions. Such methods include stormwater infiltration, rain gardens, grass swales, filter strips, disconnected impervious areas, permeable pavement and vegetative roof systems.

2. If the proposed project will create new impervious surfaces so that more than 10 percent of the portion of the parcel in the Regulatory Floodplain is covered by impervious surface, the applicant shall demonstrate that there will be no net increase in the rate and volume of stormwater surface runoff that leaves the site or that the adverse impact is mitigated.

10. Hazardous Materials

No new development shall create a threat to public health, public safety, or water quality. Chemicals, explosives, gasoline, propane, buoyant materials, animal wastes, fertilizers, flammable liquids, pollutants, or other materials that are hazardous, toxic, or a threat to water quality are prohibited from the Regulatory Floodplain. This prohibition does not apply to small quantities of these materials kept for normal household use.

Section 19: Section 18A.40.180 LMC entitled "Allowable Activities Within the Regulatory Floodplain" is created to read as follows:

A. Activities that do not meet the definition of "development" are allowed in the Regulatory Floodplain without the need for a floodplain development permit under this ordinance, provided all other Federal, State and local requirements are met. Activities include, but are not limited to, the following.

1. Routine maintenance of landscaping that does not involve grading, excavation or filling.

2. Removal of noxious weeds and hazard trees and replacement of non-native vegetation with native vegetation.

3. Normal maintenance of structures, such as re-roofing and replacing siding, provided that such work does not qualify as a substantial improvement.

4. Normal maintenance of above ground public utilities and facilities, such as replacing downed power lines.

5. Normal street and road maintenance, including filling potholes, repaving, and installing signs and traffic signals, but not expansion of paved areas.

6. Normal maintenance of a levee or other flood control facility prescribed in the operations and maintenance plan for the levee or flood control facility.

Plowing and other normal farm practices (other than structures or filling) on farms in existence as of the effective date of this ordinance.

B. The following activities are allowed in the Regulatory Floodplain without the analysis required in Sec.18A.40.170.B.6(5) or the habitat impact assessment required under LMC 14A.154.050.C, providing all other provisions of this ordinance are met, including obtaining a floodplain development permit:

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

2. Expansion of an existing structure that is no greater than ten percent beyond its existing footprint, provided that the repairs or remodeling are not a substantial improvement or a repair of substantial damage. This measurement is counted cumulatively from the effective date of this ordinance or September 22, 2011, whichever is earlier. If the structure is in the floodway, there shall be no change in the dimensions perpendicular to flow.

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

4.Development of open space and recreational facilities, such as parks, trails and hunting grounds, that do not include structures, grading, fill, impervious surfaces or removal of more than 5% of the native vegetation on that portion of the property in the Regulatory Floodplain.

Section 20: Section 18A.40.190 LMC entitled "Definitions" is amended to read as follows:

In addition to the definitions under this title, Chapter 18A.90, the definitions in Chapter 14A.165 LMC shall apply.

~~DEVELOPMENT (for the purposes of Flood Hazard). Any constructed changes to improved or unimproved real estate, including, but not limited to buildings or other structures, mining, dredging, filling, grading, paving, excavator, or drilling operations.~~

"Development" means any human-induced change to improved or unimproved real property including, but not limited to, the construction of buildings or other structures, placement of manufactured home/mobile, mining, dredging, clearing, filling, grading, paving, excavation, drilling operations, storage of equipment or materials, or the subdivision of property, removal of substantial amounts of vegetation, or alteration of natural site characteristics.

~~LOWEST FLOOR. For flood purposes, any floor usable for living purposes, which includes working, sleeping, eating, cooking or recreation, or a combination thereof. A floor used only for storage purposes is not a lowest floor.~~

LOWEST FLOOR - For flood purposes the lowest floor of the lowest enclosed area (including basement or crawl space). An unfinished or flood resistant enclosure, useable for parking of vehicles, building access or storage in an area other than a basement area, is not considered a structure's lowest floor, provided that such enclosure is compliant with Section 189A.40.170.A.4, (i.e provided there are adequate openings to allow floodwaters into the area).

Section 21: Severability. If any section, sentence, clause, or phrase of this ordinance should be held to be invalid or unconstitutional by a court of competent jurisdiction, such invalidity or unconstitutionality shall not affect the validity of any other section, sentence, clause, or phrase of this ordinance.

Section 22: Effective Date. This ordinance shall take place thirty (30) days after its publication or publication of a summary of its intent and contents.

ADOPTED by the City Council this 7th day of December, 2015.

CITY OF LAKEWOOD

Don Anderson, Mayor

Attest:

Alice M. Bush, MMC, City Clerk

Approved as to Form:

Heidi A. Wachter City Attorney