



A G E N D A

PLANNING COMMISSION

Connie Coleman-Lacadie • Don Daniels • Robert Estrada • James Guerrero • Robert Pourpasand • Paul Wagemann • Christopher Webber

Regular Meeting

Wednesday, November 18, 2015, at 6:30 pm

City Hall, Council Chambers

6000 Main Street SW, Lakewood, Washington

- 1. Call to Order**
- 2. Roll Call**
- 3. Approval of Minutes from November 4, 2015**
- 4. Public Comments**

(Members of the audience may comment on items that are not included on the agenda. Each person will be allowed 3 minutes to speak, to a total of 15 minutes per topic. Groups with a designated speaker may have a total of 10 minutes to speak.)
- 5. Public Hearings**
 - Continuance of Flood Hazard Overlay and Critical Areas Amendments from November 4, 2015
- 6. Unfinished Business**
 - None
- 7. New Business**
 - None
- 8. Reports from Commission Members & Staff**

(Planning Commission members and staff may make committee reports and announcements relating to items not on the agenda.)

Enclosures: November 4, 2015 Draft Minutes
Staff Report re:
Seattle Pump Maintenance on Clover Creek
Aquatic Plants and Fish HPAP Pamphlet Permit
Title 14A Draft Revision
Title 18A.40.100 Draft Revision

Members Only:

Please call Karen Devereaux at 253.983.7767 by Tuesday, November 17, 2015, if you are unable to attend. Thank you.

The next meeting is tentatively scheduled for December 2, 2015



**PLANNING COMMISSION
REGULAR MEETING
WEDNESDAY November 04, 2015
Council Chambers
6000 Main Street SW
Lakewood, WA 98499**

The meeting was called to order at 6:00 p.m. by Chairman, Mr. Don Daniels.

Roll Call

Planning Commission Members Present: Don Daniels, Chair; Connie Coleman-Lacadie, James Guerrero, Christopher Webber, Robert Estrada and Robert Pourpasand

Planning Commission Members on Leave of Absence: Paul Wagemann, Vice-Chair

Planning Commission Members Excused: None

Planning Commission Members Absent: None

Staff Present: David Bugher, Assistant City Manager/Community and Economic Development Director; Frank Fiori, Planning Manager; and Karen Devereaux, Recording Secretary

Council Liaison: Councilmember Paul Bocchi

Acceptance of Agenda

No changes were made to the agenda.

Approval of Minutes

Chairman, Mr. Don Daniels, opened the floor for discussion of the draft minutes of the meeting held October 21, 2015.

Mr. Robert Estrada made the motion to approve the minutes as written. The second was made by Mr. Robert Pourpasand. A unanimous voice vote carried the motion.

Public Comments

None.

Public Hearing

Flood Hazard Overlay and Critical Areas Amendments Public Hearing

Mr. Frank Fiori informed the commissioners a notice was posted in the local Tacoma News Tribune to alert citizens to these intended proceedings and prior to this public hearing 373 letters were sent directly to property owners who may be impacted in the future for flood insurance purposes.

Proposed amendments to Lakewood Municipal Code (LMC) Title 18A and Title 14A were introduced to the Planning Commission at their August 19, 2015 meeting. Mr. Frank Fiori reiterated the background information so the public hearing attendees would

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

As a participating jurisdiction in the National Flood Insurance Program (NFIP), the City of Lakewood is 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) and the National Marine Fisheries Service Biological Opinion (BiOp).

City staff has been preparing amendments to both the LMC Title 18A and LMC Title 14A using a model ordinance prepared by FEMA and guidance documents provided by Ecology in determining what amendments may be necessary to meet the requirements of the BiOp as well as the requirements of the NFIP.

Discussion ensued regarding the proposed updated Flood Insurance Rate Map (FIRM) which will increase the amount of land within the City that is classified as being in a special flood hazard area, in particular lands along Clover Creek in the Racquet Club Estates and Springbrook neighborhoods. The proposed amendments will bring the City's flood hazard area and critical area ordinances into compliance with the National Flood Insurance Program (NFIP), Federal Emergency Management Agency (FEMA), Endangered Species Act (ESA) and the Growth Management Act (GMA).

Mr. Frank Fiori suggested the staff recommendation to move forward with the proposed amendments, indicating DOE is in agreement with the proposed changes and FEMA has requested a few language changes staff is completing. Mr. David Bugher commented both Department of Ecology and FEMA were invited to attend the hearing but declined participation.

Mr. Frank Fiori described to property owners how to acquire a map indicating where the flood zone may touch or impact their specific properties and offered prepared cards detailing those instructions. Mr. Frank Fiori explained the next steps would involve these preliminary maps becoming final in mid-2016. Six months after that date the final maps become effective then FEMA would notify lending institutions who would notify property owners of requirements, not the City of Lakewood.

Mr. Don Daniels, Chair, thanked staff for sending the advanced notification letters to the property owners and opened the floor to hear public comments on this subject.

Jack Schneider, Lakewood citizen, asked how the zones are determined on the flood zone maps and how does he determine if his house is affected. Mr. Frank Fiori gave another detailed explanation of how to view the FIRM maps on the City website for a clearer understanding. Mr. Frank Fiori explained it is possible only a small piece of the parcel is in the flood zone and the structure may not be in the flood zone.

Glen Spieth, Lakewood citizen, noted the map on the website wasn't easy to understand and suggested more information be added to the website. He commented from a historical standpoint that he believed the Lakewood Mall area was flooded in 1933. Mr. Dave Bugher clarified for the citizen audience the pink areas on the map mean you are most likely subject to the 100 year flood, noting the predominantly impacted properties are found in Springbrook and along portions of Clover Creek, other than that, most of the areas haven't changed much.

Jozef Belsak, Lakewood citizen, affirmed that his questions about the map were now answered but was concerned about a public works pump on Clover Creek near Seattle Avenue where blackberry and vegetation over-growth should be better maintained, but FEMA will not help to improve the flow of the creek waters. Mr. Dave Bugher provided an explanation of conflicts between environmental regulations and stormwater maintenance. Contact information for Mr. Greg Vigoren, Surface Water Division Manager, Public Works, was provided to Mr. Jozef Belsak.

David Wilcox, Lakewood property owner, also owns property on Seattle Avenue and commented that he is within a FEMA Alpha II flood zone and has purchased insurance because of concerns about the flow of Clover Creek and the problems it is already having with flooding in that area.

Mr. Don Daniels, Chair, stopped the public hearing portion of the meeting for the evening and asked for a vote from commissioners to continue the public comments to the next scheduled meeting date of November 18, 2015. Mr. Dave Bugher recommends allowing staff to gather more information on the questions and concerns posed during public comment of how to determine exactly where property structures are located in relation to flood lines as well as the issue of vegetation blocking the flow of the water and the potential of creating flood problems that could otherwise be resolved if the channel was maintained properly.

The motion for the continuance of the public hearing to the November 18th meeting was made by Ms. Connie Coleman-Lacadie and seconded by Mr. Christopher Webber. A voice vote was taken and the motion carried unanimously.

Unfinished Business

None.

New Business

None.

Reports from Commission Members and Staff

Mr. David Bugher quickly informed commissioners of staff project updates:

Noting a significant increase in development activity, Mr. Dave Bugher informed the commissioners the Lakewood Towne Center will become home to five new restaurants in the next three to six months.

Marriott Hotels is moving forward with their plans to build on Pacific Hwy SW.; building permits have been submitted for review.

Lakewood Ford is expanding their site on Pacific Hwy SW.

Chick-fil-A Restaurant has been issued a conditional use permit for their drive-through service at the Schooner location on 100th and Bridgeport Way SW.

A remodel is scheduled for the development at the south side of 100th Street SW near Gravelly Lk Dr SW.

Numerous abatement actions are underway, in particular, on South Tacoma Way. The City has also initiated action to close the Golden Lion Motel also located on South Tacoma Way.

Mr. Dave Bugher informed commissioners a couple of items will be coming back to them for consideration:

1. The Joint Land Use Study was reported to Council on Monday night stating satellite parking in the Air Corridor II Zone is okay in that particular location. However, the Swap Meet exceeds its intensity limitations on Saturday's and Sunday's and this may not be what the City should allow. The Joint Land Use Study will come before the Planning Commission for review again in the near future.

2. The Housing Report will come before you in December.

Mr. Don Daniels, Chair, reminded commissioners quorum must be met to conduct business at meetings and urged everyone to contact staff if they are unable to attend for any reason, noting the group is down one member until after the first of the year.

Ms. Connie Coleman-Lacadie requested clarification as to why Council postponed the decision on Cottage Housing Regulations until February 2016. Mr. Dave Bugher explained there is concern over increased densities in the residential estates zone and are seeking extensive collection of additional information on impacts to that neighborhood which will take some time. Mr. Dave Bugher stated they would be kept informed.

Mr. Don Daniels, Chair, queried the results of the commission recommendation to Council to move forward with the 2015 Comp Plan Amendments. Mr. Dave Bugher explained Council has questions regarding transportation concurrency and a whole menu of other questions. This topic will be discussed again at a study session on Monday when Council will reveal which action or direction they plan to take.

Ms. Connie Coleman-Lacadie advocated for fine dining in Lakewood and Mr. Dave Bugher noted Hop Jack's classic American food restaurant is considering a building site right across the street from City Hall soon. While another fine dining restaurateur is considering relocating to Lakewood due to the minimum wage increase in Tacoma.

Mr. Robert Estrada queried the role of the commission, as it relates to Council postponing decisions on the commissioners recommendations on the cottage housing, asking if the commission is now just out of the picture. Mr. Dave Bugher explained to the commission that staff is responding to a motion and a second that Council requested information be brought back to Council on February 1, 2016. He assured Mr. Robert Estrada that Council values the commissioner's input but the motion played out that the information would be brought directly to Council for consideration.

Next Meeting is to be held November 18, 2015 at 6:30 p.m. in Council Chambers.

Meeting Adjourned at 7:18 p.m.

Don Daniels, Chair
Planning Commission

11/18/2015

Karen Devereaux, Recording Secretary
Planning Commission

11/18/2015



MEMORANDUM

Don Anderson
Mayor

From: Frank A. Fiori, Planning Manager

Jason Whalen
Deputy Mayor

To: City of Lakewood Planning Commission

Mary Moss
Councilmember

Date: November 10, 2015

RE: Response to questions raised at the November 4, 2015 Planning Commission public hearing on proposed flood hazard overlay and critical areas ordinance amendments.

Michael Brandstetter
Councilmember

At the November 4, 2015 public hearing on proposed amendments to the City's flood hazard overlay and critical areas ordinances a few questions were asked and concerns raised that required follow up on the part of staff.

John Simpson
Councilmember

Marie Barth
Councilmember

A concern was raised by a citizen in regard to flooding in certain parts of the City due to what was believed to be a non-operable City maintained pump facility as well as an unmaintained channel adjacent to Clover Creek. Staff contacted public works employees who are following up to determine if the pump is operating correctly. Public works staff was familiar with the unmaintained channel area adjacent to Clover Creek. Due to the fact that this channel is on private property City staff cannot perform maintenance.

Paul Bocchi
Councilmember

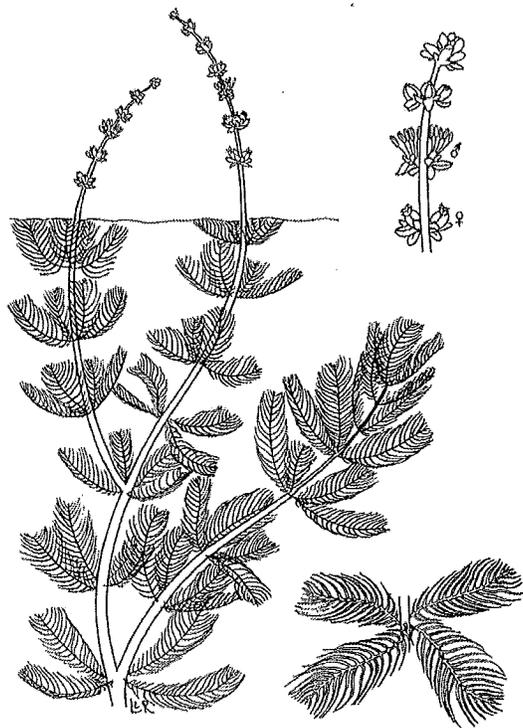
John J. Caulfield
City Manager

The Washington Department of Fish and Wildlife has produced a document entitled "2015 Aquatic Plants and Fish", a pamphlet that establishes rules for aquatic plant removal and control. The pamphlet serves as the Hydraulic Project Approval (HPA) for some types of aquatic weed or plant control and removal including physical and mechanical methods and is a guide for property owners wishing to remove aquatic plants. This pamphlet is available to the public and a copy has been included in the back up materials for the November 18, 2015 Planning Commission meeting.

Washington Department of Fish and Wildlife

AQUATIC PLANTS AND FISH

RULES FOR AQUATIC PLANT REMOVAL AND CONTROL



JULY 2015

2ND EDITION



Washington Department of
FISH and WILDLIFE

The 2nd edition of the July 2015 Aquatic Plants and Fish pamphlet corrects errors in the Recommended Work Times table of the original edition. The 2nd edition replaces the original version and must be used when conducting aquatic plant control or removal projects under authority of the pamphlet.

Cover graphic of Eurasian Water Milfoil *Myriophyllum spicatum* provided by University of Florida/IFAS Center for Aquatic and Invasive Plants. Used with permission.



Washington
Department of
**FISH and
WILDLIFE**

Washington Department of Fish and Wildlife

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About This Pamphlet

Effective July 1, 2015 the 2015 Aquatic Plants and Fish pamphlet replaces the previous version of the pamphlet published in 1998 (APF-1-98). It serves as the Hydraulic Project Approval (HPA) for some types of aquatic weed or plant control and removal including physical and mechanical methods. It does not address using grass carp, herbicides, or water column dye. You may find information regarding those methods at Washington Department of Ecology's website on aquatic plant management at <http://www.ecy.wa.gov/programs/wq/plants/management/index.html>. Depending on the method you select to control aquatic noxious weeds or beneficial plants, an individual HPA may be required. If you use this pamphlet as your HPA for aquatic weed or plant control, please review it thoroughly and follow all applicable provisions. You may download, save and print a copy of the Aquatic Plants and Fish pamphlet from the WDFW website at http://wdfw.wa.gov/licensing/aquatic_plant_removal/index.html or request one from a WDFW office. The administrative rules adopted by the Department of Fish and Wildlife (WDFW) addressed in this pamphlet are included in [WAC 220-660-290](#).

This pamphlet does not contain information about how to identify aquatic noxious weeds or beneficial plants, or make recommendations on which control method would be best in a specific situation. There are many online and other resources available that you may wish to consult when deciding whether or how to control aquatic plants. One such resource is Washington Department of Ecology's Water Quality

website, specifically its pages titled *Aquatic Plants, Algae, and Lakes* at <http://www.ecy.wa.gov/programs/wq/links/plants.html>.

Limit of WDFW Authority

- An activity conducted solely to remove or control spartina does not require an HPA.
- An activity conducted solely to remove or control purple loosestrife and that is performed with hand-held tools or equipment, or equipment carried by you when used, does not require an HPA.
- Any other activity conducted solely to remove or control aquatic noxious weeds or aquatic beneficial plants requires either a copy of the current Aquatic Plants and Fish pamphlet available from the department or an individual HPA.
- Information on applying for individual HPAs and how to contact a WDFW biologist is available at the following WDFW website: <http://wdfw.wa.gov/licensing/hpa/>.

Other Permits May Be Necessary

The Aquatic Plants and Fish pamphlet pertains only to WDFW's administration of hydraulic projects regulated under the Revised Code of Washington ([Chapter 77.55 RCW](#)). It is your responsibility to apply for and obtain any additional permits or authorization from other government agencies (local, state and/or federal) and land owners that may be necessary for this project. The Governor's Office for Regulatory Innovation and Assistance (ORIA) at http://www.oria.wa.gov/site/alias_oria/347/default.aspx can assist you in determining your permit needs.

Aquatic Vegetation and Fish

Beneficial plants play a significant role in lakes and streams by providing food and habitat for fish life, stabilizing shorelines, and contributing to nutrient cycling. Sometimes beneficial plants can grow in overabundance, usually because of excessive inputs of nutrients such as nitrogen or phosphorus. In contrast, aquatic noxious weeds can threaten native vegetation, fish life, and the habitat that supports fish life.

Often the best approach to controlling and removing aquatic plants is developing a vegetation management plan. A vegetation management plan is a comprehensive approach to controlling aquatic plants where all strategies are considered and usually some combination of techniques is selected and implemented. These plans should be based on the biology and ecology of the aquatic plant to be controlled and the environmental characteristics of the site. Integrated vegetation management planning is encouraged to comprehensively address aquatic plant problems for a watercourse.

Definitions

The following definitions apply to **aquatic plant** control and removal activities that you conduct under authority of the Aquatic Plants and Fish pamphlet. Terms in **bold** font throughout this pamphlet are defined here.

Aquatic beneficial plant: all native and nonnative **aquatic plants** except those on the state noxious weed lists in WAC 16-750-005, 16-750-011, and 16-750-015.

Aquatic noxious weed: an **aquatic plant** on the state noxious weed lists in WAC 16-750-005, 16-750-011, and 16-750-015.

Aquatic plant: a native or nonnative emergent, submersed, partially submersed, free-floating, or floating-leaved plant species that is dependent upon fresh, brackish, or marine water ecosystems and includes all stages of development and parts.

Bottom barrier or screen: sheets of synthetic or natural fiber material used to cover and kill plants growing on the bottom of a watercourse.

Diver-operated dredging: the use of portable suction or hydraulic dredges held by SCUBA divers to remove **aquatic plants**.

Early infestation: a stage of development, life history, or area of coverage of an **aquatic noxious weed** that makes one hundred percent control and **eradication** likely to occur.

Entrained: the entrapment of fish into a watercourse diversion that has no screen, into high velocity water along the face of an improperly designed screen, or into the vegetation cut by a mechanical harvester.

Eradication: to eliminate an **aquatic noxious weed** within an area of infestation.

Hydraulic project approval (HPA): A written approval for a hydraulic project signed by the director of WDFW or the director's designee; or an Aquatic Plants and Fish pamphlet issued by the WDFW, which identifies and authorizes specific **aquatic plant** removal and control activities.

Mechanical harvesting and cutting: partially removing or controlling **aquatic plants** by using aquatic mechanical harvesters, which cut and collect **aquatic plants**, and mechanical cutters, which only cut **aquatic plants**.

Purple loosestrife: *Lythrum salicaria* or *Lythrum virgatum* as classified in RCW 17.10.010 (10) and defined in RCW 17.26.020 (5b).

Rotovation: the use of aquatic rotovators that have underwater rototiller-like blades to uproot **aquatic plants** as a means of control.

Spartina: *Spartina alterniflora*, *Spartina anglica*, *Spartina x townsendii* and *Spartina patens* as classified in RCW 17.10.010 (10) and defined in RCW 17.26.020 (5b).

Weed rolling: the use of a mechanical roller designed to control **aquatic plant** growth.

Methods and Requirements for Aquatic Plant Control and Removal

The methods identified in this section are commonly used for aquatic plant removal or control. When using these methods you must follow the rules in this section. If you cannot follow these rules, you may apply to WDFW for an individual HPA to permit exceptions to the rules. Table 1 summarizes the overall permit requirements.

Table 1. Permit Requirements for Aquatic Noxious Weed and Beneficial Plant Removal or Control

Control Method	Aquatic Noxious Weed			Aquatic Beneficial Plants		
	Permit Requirement			Permit Requirement		
	Pamphlet without Area Limitations	Pamphlet with Area Limitations	Individual HPA	Pamphlet without Area Limitations	Pamphlet with Area Limitations	Individual HPA
Removal by Hand	✓				✓	
Bottom Barriers and Screens		✓			✓	
Weed Rolling		✓				✓
Mechanical Harvesting and Cutting	✓					✓
Rotovation			✓			✓
Diver-operated Dredging	✓					✓
Other Dredging			✓			✓
Water Level Manipulation			✓			✓

Control or removal of aquatic plants under the *Aquatic Plants and Fish* pamphlet may be conducted without timing restriction. However, to minimize the possibility of harm to fish life during vulnerable life stages, please use Table 2 to identify recommended work times.

Removal of Aquatic Plants by Hand

Hand removal or control of **aquatic plants** can help eradicate an **early infestation** of **aquatic noxious weeds** and can be effective for small, confined areas.

Hand removal or control of both **aquatic noxious weeds** and **aquatic beneficial plants** must comply with the following technical provisions except where otherwise indicated. In addition, you should follow the timing recommendations identified in Table 2 to reduce the possibility of harm to fish life.

1. A copy of the current *Aquatic Plants and Fish* pamphlet available from the department serves as an HPA, unless otherwise indicated, and must be on the job site at all times.

2. Because of potential impacts to sockeye spawning areas, the department requires individual HPAs for activities in Baker Lake and lakes Osoyoos, Ozette, Pleasant, Cle Elum, Sammamish, and Washington. If authorization is given, the department may require mitigation through a written agreement between the applicant and the department for impacts of raking in the spawning area.
3. Work is restricted to hand-pulling, using hand-held tools or equipment, or using equipment that is carried by you when used.
4. Removing or controlling aquatic beneficial plants to maintain an access for boating or swimming is allowed along no more than ten linear feet of the applicant's shoreline. The department requires individual HPAs for boating and swimming access projects that cover a larger area.
5. When hand-pulling aquatic noxious weeds, remove the entire plant when possible. Completely remove detached plants and plant parts from waters of the state when possible. Dispose of detached plants and plant parts at an upland site so they will not reenter waters of the state.
6. Do not remove or disturb existing fish habitat components such as logs, stumps, and large boulders.
7. Conduct work in a manner that minimizes the release of sediment and sediment-laden water from the job site.
8. Prevent contaminants from the project, such as petroleum products, hydraulic fluid, or any other toxic or harmful materials, from entering or leaching into waters of the state.
9. If at any time, as a result of project activities, you observe a fish kill or fish life in distress, you must immediately cease operations and notify the department and the Washington Military Department Emergency Management Division (1-800-258-5990) of the problem. You may not resume work until the department gives approval. The department will require additional measures to mitigate the project impacts.
10. Do not use contaminated equipment, which can spread plant parts. Thoroughly remove and properly dispose of all viable plants and plant parts from the equipment before using the equipment in waters of the state.

Bottom Barriers and Screens

Bottom barriers or screens can help eradicate an **early infestation of aquatic noxious weeds** and are best used in small, confined areas where control of all plants is needed.

Bottom barrier or screen projects to control or remove either **aquatic noxious weeds** or **aquatic beneficial plants** must comply with the following technical provisions except where otherwise indicated. In addition, you should follow the timing recommendations identified in Table 2 to reduce the possibility of harm to fish life.

1. A copy of the current *Aquatic Plants and Fish* pamphlet available from the department serves as an HPA, unless otherwise indicated, and must be on the job site at all times.
2. Because of potential impacts to sockeye spawning areas, the department requires individual HPAs for activities in Baker Lake and lakes Osoyoos, Ozette, Pleasant, Cle Elum, Sammamish, and Washington. If authorization is given, the department may require mitigation through a written

agreement between the applicant and the department for impacts of the activity to the spawning area.

3. For removing and controlling aquatic noxious weeds, the bottom barrier or screen material can cover no more than fifty percent of the length of the applicant's shoreline. The department requires individual HPAs for bottom barrier or screen projects covering a larger area. Bottom barrier or screen and anchor material consisting of biodegradable material may be left in place. Within two years of placement, unless otherwise approved by the department, completely remove bottom barrier or screen and anchor material that is not biodegradable to encourage recolonization of aquatic beneficial plants.
4. To remove or control aquatic beneficial plants to maintain an area for boating or swimming, a bottom barrier or screen and anchor material may be installed along no more than ten linear feet of the applicant's shoreline. The department requires individual HPAs for bottom barrier or screen projects for boating and swimming access projects covering a larger area.
5. Securely anchor a bottom barrier or screen material with pea gravel-filled bags, rock, or similar material to prevent billowing and movement off site.
6. Regularly maintain a bottom barrier or screen and anchors to ensure the barrier or screen and anchors are functioning properly. Barriers or screens that have moved or are billowing must immediately be securely reinstalled or removed from waters of the state.
7. Existing fish habitat components such as logs, stumps, and large boulders may be relocated within the water body if needed to properly install the bottom barrier or screen. Do not remove these habitat components from the water body.
8. If at any time, as a result of project activities, you observe a fish kill or fish life in distress, you must immediately cease operations and notify the department and the Washington Military Department Emergency Management Division (1-800-258-5990) of the problem. You may not resume work until the department gives approval. The department will require additional measures to mitigate the project impacts.
9. Do not use contaminated equipment, which can spread plant parts. Thoroughly remove and properly dispose of all viable plants and plant parts from the equipment before using the equipment in waters of the state.

Weed Rolling

Weed rollers are best used when you need to control all **aquatic plants**.

Weed rolling projects to control or remove both **aquatic noxious weeds** and **aquatic beneficial plants** must comply with the following technical provisions except where otherwise indicated.

1. A copy of the current *Aquatic Plants and Fish* pamphlet available from the department serves as an HPA, unless otherwise indicated, and must be on the job site at all times.
2. Because of potential impacts to sockeye spawning areas, the department requires individual HPAs for activities in Baker Lake and lakes Osoyoos, Ozette, Pleasant, Cle Elum, Sammamish, and Washington. If authorization is given, the department may require mitigation through a written agreement between the applicant and the department for impacts of the activity to the spawning area.

3. Weed rollers cannot be used to remove an early infestation of aquatic noxious weeds. Using weed rollers to remove or control all other infestation levels of aquatic noxious weeds can cover an area of no more than two thousand five hundred square feet. The department requires individual HPAs for weed roller projects covering a larger area.
4. The department requires individual HPAs to remove or control aquatic beneficial plants.
5. When using weed rollers to remove or control aquatic noxious weeds, completely remove detached plants and plant parts from the water body. Dispose of detached plants and plant parts at an upland site so they will not reenter waters of the state.
6. Conduct work in a manner that minimizes the release of sediment and sediment-laden water from the job site.
7. Prevent contaminants from the project, such as petroleum products, hydraulic fluid, or any other toxic or harmful materials, from entering or leaching into waters of the state.
8. If at any time, as a result of project activities, you observe a fish kill or fish life in distress, you must immediately cease operations and notify the department and the Washington Military Department Emergency Management Division (1-800-258-5990) of the problem. You may not resume work until the department gives approval. The department will require additional measures to mitigate the project impacts.
9. Existing fish habitat components such as logs, stumps, and large boulders may be relocated within the water body if needed to properly install the weed roller. Do not remove these habitat components from the water body.
10. Do not use contaminated equipment, which can spread plant parts. Thoroughly remove and properly dispose of all viable plants and plant parts from the equipment before using the equipment in waters of the state.

Mechanical Harvesting and Cutting

Mechanical harvesting and cutting projects to control or remove both **aquatic noxious weeds** and **aquatic beneficial plants** must comply with the following technical provisions except where otherwise indicated. In addition, you should follow the timing recommendations identified in Table 2 to reduce the possibility of harm to fish life.

1. A copy of the current *Aquatic Plants and Fish* pamphlet available from the department serves as an HPA, unless otherwise indicated, and must be on the job site at all times.
2. Do not use mechanical harvesters and cutters to remove an early infestation of aquatic noxious weeds.
3. The department requires individual HPAs to remove aquatic beneficial plants.
4. When using mechanical harvesters or cutters to remove or control aquatic noxious weeds, completely remove detached plants and plant parts from the water body. Dispose of detached plants and plant parts at an upland site so they will not reenter waters of the state.
5. Prevent contaminants from the project, such as petroleum products, hydraulic fluid, or any other toxic or harmful materials, from entering or leaching into waters of the state. Keep equipment well-maintained and use food-grade oil in the hydraulic system.

6. If at any time, as a result of project activities, you observe a fish kill or fish life in distress, you must immediately cease operations and notify the department and the Washington Military Department Emergency Management Division (1-800-258-5990) of the problem. You may not resume work until the department gives approval. The department will require additional measures to mitigate the project impacts.
7. Existing fish habitat components such as logs, stumps, and large boulders may be relocated within the water body if needed to operate the equipment. Do not remove these habitat components from the water body.
8. Conduct mechanical harvester and cutter operations only in waters deep enough to avoid contacting the bottom with the cutter blades.
9. Always operate mechanical harvesters and cutters so that they cause the least adverse impact to fish life.
10. Immediately and safely return to the water body all fish life that becomes entrained in the cut vegetation while operating a mechanical harvester.
11. Do not use contaminated equipment which can spread plant parts. Thoroughly remove and properly dispose of all viable plants and plant parts from the equipment before using the equipment in waters of the state.
12. Limit alteration or disturbance of the bank and bank vegetation to that required to conduct the project. Protect all disturbed areas from erosion using vegetation or other means. Replant the banks within one year with native or other approved woody species.

Rotovation

The department requires an individual HPA for **rotovation** projects. **Rotovation** projects to control or remove **aquatic noxious weeds** and **aquatic beneficial plants** may not be conducted under the *Aquatic Plants and Fish* pamphlet.

Aquatic plant dredging

Diver-operated dredging can help eradicate an **early infestation** of **aquatic noxious weeds** and can help conduct long-term maintenance after control or removal using other methods.

Diver-operated dredging projects to control or remove **aquatic noxious weeds** must comply with the following technical provisions except where otherwise indicated. In addition, you should follow the timing recommendations identified in Table 2 to reduce the possibility of harm to fish life. The department requires individual HPAs to eradicate or control **aquatic beneficial plants** using **diver-operated dredging**.

For dredging other than **diver-operated dredging** the department requires an individual HPA to control or remove **aquatic plants** and these projects may not be conducted under the *Aquatic Plants and Fish* pamphlet.

1. A copy of the current *Aquatic Plants and Fish* pamphlet available from the department serves as an HPA for **diver-operated dredging** only, unless otherwise indicated, and must be on the job site at all times.

2. Because of potential impacts to sockeye spawning areas, the department requires individual HPAs for activities in Baker Lake and lakes Osoyoos, Ozette, Pleasant, Cle Elum, Sammamish, and Washington. If authorization is given, the department may require mitigation through a written agreement between the applicant and the department for impacts of the activity to the spawning area.
3. Prevent contaminants from the project, such as petroleum products, hydraulic fluid, or any other toxic or harmful materials, from entering or leaching into waters of the state. Keep equipment well-maintained and use food-grade oil in the hydraulic system.
4. If at any time, as a result of project activities, you observe a fish kill or fish life in distress, you must immediately cease operations and notify the department and the Washington Military Department Emergency Management Division (1-800-258-5990) of the problem. You may not resume work until the department gives approval. The department will require additional measures to mitigate the project impacts.
5. Existing fish habitat components such as logs, stumps, and large boulders may be relocated within the water body if needed to operate the equipment. Do not remove these habitat components from the water body.
6. Always conduct dredging with dredge types and methods that cause the least adverse impact to fish life.
7. Do not use contaminated equipment, which can spread plant parts. Thoroughly remove and properly dispose of all viable plants and plant parts from the equipment before using the equipment in waters of the state.
8. To avoid stranding fish, the bed must not contain pits, potholes, or large depressions when dredging is finished.
9. Limit alteration or disturbance of the bank and bank vegetation to that needed to conduct the project. Protect all disturbed areas from erosion, using vegetation or other means. Replant the banks within one year with native or other approved woody species.
10. When using diver-operated dredging to remove or control aquatic noxious weeds, you must completely remove plants and plant parts from the water body. Remove plants and plant parts from the dredge slurry before returning it to the water body. Dispose of dredged bed materials, including detached plants and plant parts, at an upland disposal site so they will not reenter waters of the state.
11. Operate a hydraulic dredge with the intake at or below the surface of the material that is being removed. Raise the intake up to three feet above the bed only for brief periods of purging or flushing the intake system.

Water level manipulation

Manipulating water levels (drawdowns) to remove or control **aquatic noxious weeds** or **aquatic beneficial plants** by exposing plants and root systems to extreme temperature and moisture conditions may be appropriate under specific circumstances. Accurate plant identification is important to ensure success.

The department requires an individual HPA to manipulate water levels and these projects may not be conducted under the *Aquatic Plants and Fish* pamphlet.

Recommended Work Times

Table 2 lists the recommended work times for each county and certain waterbodies within each county. The listed timing indicates those periods when WDFW recommends you conduct your project if you are using the pamphlet as the **HPA**. If you wish to conduct your project activities outside of these recommended times please submit an application for an individual **HPA** to WDFW.

1. The general work time for a county applies to all state waters within that county, unless otherwise indicated in the table.
2. The work time for listed state waters applies to all its tributaries, unless otherwise indicated. Some state waters occur in multiple counties. Check the listing for the county in which you wish to remove or control **aquatic plants** to determine the work time for that water.
3. Where a tributary is listed as a boundary, that boundary shall be the line perpendicular to the receiving stream that is projected from the most upstream point of the tributary mouth to the opposite bank of the receiving stream.
4. **Aquatic plant** removal and control within waterbodies identified in the table of recommended work times as "Submit Application" are not recommended under the *Aquatic Plants and Fish* pamphlet. Please submit an application for an individual **HPA** to work in these waterbodies.

Table 2. Recommended Work Times for Removal or Control of Aquatic Plants

Washington Counties and State Waters Water Resource Inventory Area (WRIA) in parentheses	Aquatic Plant Removal or Control Recommended Only Between These Dates
Adams County	July 1 - October 31
Crab Creek (41.0002)	July 16 - February 28
Esquatzel Creek (36.MISC)	June 1 - February 28
Palouse River (34.0003)	July 16 - February 28
Asotin County	July 16 - September 15
Snake River (35.0002)	See below
Alpowa Creek (35.1440)	July 16 - December 15
Asotin Creek (35.1716)	July 16 - August 15
Couse Creek (35.2147)	July 16 - December 15
Grande Ronde River (35.2192)	July 16 - September 15
Tenmile Creek (35.2100)	July 16 - December 15
Benton County	June 1 - September 30
Columbia River	See below
Glade Creek (31.0851)	August 1 - September 30
Yakima River (37.0002)	June 1 - September 15
Amon Creek (37.0009)	June 1 - September 30
Corral Creek (37.0002)	June 1 - September 30
Spring Creek (37.0205)	June 1 - September 30
Chelan County	July 16 - August 15
Columbia River	See below
Antoine Creek (49.0294) - Mouth to falls at river mile 1.0	July 1 - February 28
Antoine Creek (49.0294) - Upstream of falls at river mile 1.0	July 1 - March 31
Chelan River (47.0052) - Mouth to Chelan Dam	July 16 - September 30
Colockum Creek (40.0760)	July 1 - October 31
Entiat River (46.0042) - Mouth to Entiat Falls	July 16 - July 31
Entiat River (46.0042) - Upstream of Entiat Falls	July 16 - March 31
Crum Canyon (46.0107)	July 16 - March 31
Mad River (46.0125)	July 16 - July 31
Indian Creek (46.0128)	July 16 - February 28
Lake Chelan (47.0052)	Submit Application
Railroad Creek (47.0410)	July 16 - September 30
Stehekin River (47.0508)	Submit Application
Twenty-five Mile Creek (47.0195)	July 16 - September 30
Other Lake Chelan tributaries outside of North Cascades National Park	July 1 - August 15
Other Lake Chelan tributaries within North Cascades National Park	Submit Application
Number 1 Canyon (45.0011)	July 1 - February 28
Number 2 Canyon (45.0012)	July 1 - February 28
Squilchuck Creek (40.0836) - Mouth to South Wenatchee Avenue	July 1 - September 30
Squilchuck Creek (40.0836) - Upstream of South Wenatchee Avenue	July 1 - February 28
Stemilt Creek (40.0808) - Mouth to falls	July 1 - September 30
Stemilt Creek (40.0808) - Upstream of falls	July 1 - February 28
Wenatchee River (45.0030) - Mouth to Hwy 2 Bridge in Leavenworth	July 15 - September 30
Wenatchee River (45.0030) - Hwy 2 Bridge in Leavenworth to Lake Wenatchee	July 15 - August 15
Beaver Creek (45.0751)	July 1 - September 30
Chiwaukum Creek (45.0700)	July 1 - July 31
Chiwawa River (45.0759) - Mouth to Phelps Creek	July 1 - July 31
Chiwawa River (45.0759) - Upstream of Phelps Creek	July 1 - July 31
Deep Creek (45.0764)	July 1 - February 28
Phelps Creek (45.0875)	July 16 - August 15
Icicle Creek (45.0474) - Mouth to Johnny Creek	July 1 - July 31
Icicle Creek (45.0474) - Upstream of Johnny Creek	July 1 - July 31
Fourth of July Creek (45.0525)	July 1 - February 28

Washington Counties and State Waters Water Resource Inventory Area (WRIA) in parentheses	Aquatic Plant Removal or Control Recommended Only Between These Dates
Lake Wenatchee (45.0030)	Submit Application
Little Wenatchee (45.0985) - Mouth to Wilderness Boundary	July 1 - July 31
Little Wenatchee (45.0985) - Upstream of Wilderness Boundary	Submit Application
White River (45.1116) - Mouth to White River Falls	July 1 - July 31
White River (45.1116) - Upstream of White River Falls	July 1 - February 28
Nason Creek (45.0888)	July 1 - July 31
Peshastin Creek (45.0232) - Mouth to Negro Creek	July 16 - August 15
Ingalls Creek (45.0273) - Mouth to Cascade Creek	Submit Application
Ingalls Creek (45.0273) - Upstream of Cascade Creek	July 16 - February 28
Negro Creek (45.0323) - Mouth to falls at stream mile 2.9	Submit Application
Negro Creek (45.0323) - Upstream of falls at stream mile 2.9	July 16 - February 28
Ruby Creek (45.0318)	July 16 - February 28
Peshastin Creek (45.0232) - Upstream of Negro Creek	August 1 - February 28
Tronson Creek (45.0346)	August 1 - February 28
Scotty Creek (45.0376)	August 1 - February 28
Shaser Creek (45.0365)	August 1 - February 28
Clallam County	July 16 - September 15
Clallam River (19.0129)	August 1 - August 15
Dungeness River (18.0018)	Submit Application
Independent Creek (18.MISC)	August 1 - August 31
Elwha River (18.0272)	August 1 - August 15
Hoko River (19.0148)	August 1 - September 15
Jimmycomelately Creek (17.0285)	August 1 - August 31
Lake Ozette (20.0046)	Submit Application
Little Quilcene River (17.0076)	July 16 - August 31
Lake Ozette tributaries	July 16 - September 15
Lyre River (19.0031)	August 1 - September 15
McDonald Creek (18.0160)	August 1 - September 15
Morse Creek (18.0185)	August 1 - August 15
Ozette River (20.0046)	July 16 - September 15
Pysht River (19.0113)	August 1 - September 15
Quillayute River (20.0096, 20.0162, 20.0175)	August 1 - August 15
Bogachiel River (20.0162)	Submit Application
Calawah River (20.0175)	August 1 - August 15
Salmon Creek (17.0245)	July 16 - August 31
Sekiu River (19.0203)	August 1 - September 15
Snow Creek (17.0219)	July 16 - August 31
Sol Duc River (20.0096)	Submit Application
Lake Pleasant (20.0313)	Submit Application
Lake Pleasant tributaries	July 16 - September 15
Sooes River (20.0015)	July 16 - September 15
Clark County	July 16 - September 30
Columbia River	See below
Lacamas Creek (28.0160) - Mouth to dam	August 1 - August 31
Lacamas Creek (28.0160) - Upstream of dam	August 1 - September 30
Lewis River (27.0168)	August 1 - August 15
East Fork Lewis River (27.0173) - Mouth to Lucia Falls	August 1 - August 15
East Fork Lewis River (27.0173) - Lucia Falls to Sunset Falls	August 1 - February 28
East Fork Lewis River (27.0173) - Upstream of Sunset Falls	August 1 - February 28
Lake River (28.0020)	January 1 - December 31
Burnt Bridge Creek (28.0143)	August 1 - August 31
Salmon Creek (28.0059)	August 1 - August 31
Whipple Creek (28.0038)	August 1 - September 30

Washington Counties and State Waters Water Resource Inventory Area (WRIA) in parentheses	Aquatic Plant Removal or Control Recommended Only Between These Dates
North Fork Lewis River (27.0334) - Confluence of East Fork to Merwin Dam	August 1 - August 15
Cedar Creek (27.0339)	August 1 - September 15
North Fork Lewis River (27.0334) - Merwin Dam to Lower Falls	July 16 - August 15
Canyon Creek (27.0442)	July 16 - February 28
North Fork Lewis River (27.0168) - Upstream of Lower Falls	July 16 - August 15
Washougal River (28.0159) - Mouth to headwaters	August 1 - August 31
Columbia County	July 16 - September 30
Touchet River (32.0097)	August 1 - August 15
Grande Ronde River tributaries (35.2192)	July 16 - August 15
North Fork Touchet/Wolf Fork (32.0761)	Submit Application
South Fork Touchet (32.0708)	Submit Application
Tucannon River (35.0009)	July 16 - August 15
Walla Walla River (32.0008) - Mouth to Oregon State line	July 16 - September 15
Mill Creek (32.1436) - Mouth to Oregon State line	August 1 - August 15
Cowlitz County	July 16 - September 30
Chehalis River (22.0190/23.0190) - South Fork Chehalis River - Mouth to Fisk Falls	August 1 - August 31
Chehalis River (22.0190/23.0190) - South Fork Chehalis River - Upstream of Fisk Falls	August 1 - August 31
Columbia River	See below
Abernathy Creek (25.0297)	July 16 - September 15
Burke Creek (27.0148)	August 1 - August 31
Burris Creek (27.0151)	August 1 - August 31
Bybee Creek (27.0142)	August 1 - August 31
Canyon Creek (27.0147)	August 1 - August 31
Coal Creek (25.0340)	July 16 - September 15
Clark Creek (25.0371)	August 1 - August 31
Cowlitz River (26.0002) - Mouth to barrier dam at river mile 49.5	July 16 - August 15
Coweeman River (26.0003) - Mouth to Baird Creek	August 1 - August 31
Coweeman River (26.0003) - Upstream of Baird Creek	August 1 - August 31
Cowlitz River (26.0002) - Tributaries below barrier dam to mouth	July 16 - September 30
Owl Creek (26.1441)	July 16 - September 15
Toutle River (26.0227)	July 16 - August 15
North Fork Toutle River (26.0314) - Mouth to Debris Dam	July 16 - August 15
North Fork Toutle River (26.0314) - Upstream of Debris Dam	July 16 - August 15
Green River (26.0323) - Mouth to Shultz Creek	July 16 - September 30
Green River (26.0323) - Upstream of Shultz Creek	July 16 - September 30
South Fork Toutle (26.0248) - Mouth to Bear Creek	July 16 - September 15
South Fork Toutle (26.0248) - Upstream of Bear Creek	July 16 - September 15
Tributaries to Silver Lake	July 16 - September 30
Germany Creek (25.0313)	July 16 - September 15
Kalama River (27.0002) - Mouth to Kalama Falls	August 1 - August 15
Kalama River (27.0002) - Upstream of Kalama Falls	August 1 - August 15
Lewis River (27.0168) - Mouth to East Fork Lewis River	August 1 - August 15
North Fork Lewis River (27.0334) - Confluence of East Fork to Merwin Dam	August 1 - August 15
North Fork Lewis River (27.0334) - Merwin Dam to Lower Falls	July 16 - August 15
Mill Creek (25.0284)	July 16 - September 15
Schoolhouse Creek (27.0139)	August 1 - August 31
Douglas County	July 1 - September 30
Columbia River	See below
Douglas Creek Canyon (44.0146)	May 16 - January 31
Foster Creek (50.0065)	August 1 - April 15
McCartney Creek (44.0002)	July 1 - February 28
Pine/Corbaley Canyon Creek (44.0779)	September 16 - April 15
Rock Island Creek (44.0630)	July 1 - September 30

Washington Counties and State Waters Water Resource Inventory Area (WRIA) in parentheses	Aquatic Plant Removal or Control Recommended Only Between These Dates
Ferry County	July 1 - August 31
Columbia River	See below
Kettle River (60.0002)	June 16 - August 31
Boulder Creek (60.0130) - Mouth to Hodgson Road Bridge	Submit Application
Boulder Creek (60.0130) - Upstream of Hodgson Road Bridge	June 16 - February 28
Deadman Creek (60.0008) - Mouth to SR395 Crossing	Submit Application
Deadman Creek (60.0008) - Upstream of SR395	June 16 - February 28
Goosmus Creek (60.0254)	June 16 - February 28
Toroda Creek (60.0410)	July 1 - September 30
San Poil River (52.0004)	June 16 - September 30
Granite Creek (52.0099) - Mouth to Powerhouse Dam	June 16 - September 30
Granite Creek (52.0099) - Upstream of Powerhouse Dam	June 16 - February 28
West Fork River San Poil (52.0192) - Mouth to Deep Creek	June 16 - September 30
West Fork San Poil River (52.0192) - Upstream of Deep Creek	June 16 - September 30
Gold Creek (52.0197)	June 16 - February 28
Franklin County	June 1 - September 30
Columbia River	See below
Snake River	See below
Palouse River (34.0003)	July 16 - February 28
North bank tributaries of the lower Snake River between Palouse River and the mouth of the Snake River	June 16 - October 31
Garfield County	July 16 - September 30
Snake River (35.0003)	See below
Alpowa Creek (35.1440)	July 16 - December 15
Asotin Creek (35.1716)	July 16 - August 15
Deadman Creek (35.0688)	July 16 - December 15
Grande Ronde River tributaries (35.2192)	July 16 - August 15
Meadow Creek (35.0689)	July 16 - December 15
Tucannon River (35.0009) - Mouth to Panjab Creek	July 16 - August 15
Tucannon River (35.0009) - Upstream of Panjab Creek	July 16 - August 15
Pataha Creek (35.0123) - Mouth to Pataha Creek	January 1 - December 31
Pataha Creek (35.0123) - Upstream of Pataha Creek	July 16 - December 31
Grant County	July 1 - October 31
Columbia River	See below
Crab Creek (41.0002)	July 16 - September 15
Grays Harbor County	July 16 - October 15
Chehalis River (22.0190/23.0190) - Mouth to Porter Creek	August 1 - August 31
Chehalis River (22.0190/23.0190) - Porter Creek to Fisk Falls	August 1 - August 15
Chehalis River (22.0190/23.0190) - Upstream of Fisk Falls	August 1 - August 15
Cedar Creek (23.0570)	August 1 - September 30
Cloquallum Creek (22.0501)	August 1 - September 30
Porter Creek (23.0543)	August 1 - September 30
Satsop River (22.0360)	August 1 - August 31
Wishkah River (22.0191)	August 1 - October 15
Wynoochee River (22.0260)	August 1 - September 30
Copalis River (21.0767)	August 1 - October 15
Elk River (22.1333)	July 1 - October 31
Hoquiam River (22.0137)	August 1 - October 15
Humtulsips River (22.0004) - Mouth to Forks	August 1 - September 30
Humtulsips River (22.0004) - Upstream of Forks	August 1 - September 30
Johns River (22.1270)	August 1 - September 30
Moclips River (21.0731)	August 1 - October 15
North River (24.0034)	August 1 - September 30

Washington Counties and State Waters Water Resource Inventory Area (WRIA) in parentheses	Aquatic Plant Removal or Control Recommended Only Between These Dates
Queets River (21.0001)	August 1 - August 15
Quinalt River (21.0398)	August 1 - August 15
Raft River (21.0337)	August 1 - October 15
Island County	June 16 - October 15
Cavalero Creek (06.0065)	June 16 - December 15
Chapman Creek (06.0070)	June 16 - December 15
Crescent Creek (06.0002)	June 16 - December 15
Cultus Creek (06.0026)	June 16 - March 15
Deer Creek (06.0024)	June 16 - March 15
Dugualla Creek (06.0001)	June 16 - March 15
Glendale Creek (06.0025)	June 16 - December 15
Kristoferson Creek (06.0062-06.0063)	May 1 - December 15
Maxwelton Creek (06.0029)	June 16 - December 15
North Bluff Creek (06.0006)	June 16 - March 15
Old Clinton Creek (06.0023)	June 16 - March 15
Jefferson County	July 16 - October 31
Big Quilcene River (17.0012) - Mouth to Falls	July 16 - August 31
Big Quilcene River (17.0012) - Falls to Forks	August 1 - February 28
Big Quilcene River (17.0012) - Upstream of Forks	August 1 - February 28
Bogachiel River (20.0162)	Submit Application
Chimacum Creek (17.0203)	July 16 - September 15
Donovan Creek (17.0115)	July 1 - October 15
Dosewallips River (16.0442)	July 16 - August 15
Duckabush River (16.0351)	July 16 - August 15
Dungeness River (18.0018)	August 1 - August 15
Elwha River (18.0272)	August 1 - August 15
Goodman Creek (20.0406)	August 1 - September 15
Hoh River (20.0422)	August 1 - August 15
Little Quilcene River (17.0076)	July 16 - August 31
Queets River (21.0001)	August 1 - August 15
Matheny Creek (21.0165)	August 1 - August 15
Sams River (21.0205)	August 1 - August 15
Quinalt River (21.0398)	August 1 - August 15
Salmon Creek (17.0245)	July 16 - August 31
Skokomish River (16.0001)	August 1 - August 31
Snow Creek (17.0219)	July 16 - August 31
Tarboo Creek (17.0129)	August 1 - September 30
Thorndyke Creek (17.0170)	August 1 - October 15
King County	July 16 - September 30
Cedar River (08.0299) - Mouth to Forks	August 1 - August 31
Cedar River (08.0299) - Upstream of Forks	August 1 - August 31
Issaquah Creek (08.0178)	August 1 - August 31
Sammamish River (08.0057)	August 1 - August 31
Steele Creek (08.0379)	July 16 - February 28
Green River (Duwamish River) (09.0001) - Mouth to Sawmill Creek	August 1 - August 31
Green River (Duwamish River) (09.0001) - Upstream of Sawmill Creek	August 1 - August 31
Lake Washington tributaries (08.LKWA)	August 1 - August 31
Snoqualmie River (07.0219) - Mouth to Snoqualmie Falls	August 1 - August 15
Snoqualmie River (07.0219) - Snoqualmie Falls to mouth of South Fork	July 16 - February 28
Patterson Creek (07.0376)	July 16 - September 30
Middle Fork Snoqualmie River (07.0219) - Mouth to Taylor Creek	July 16 - February 28
Middle Fork Snoqualmie River (07.0219) - Upstream of Taylor Creek	July 16 - February 28
Goat Creek (07.0754)	July 16 - February 28

Washington Counties and State Waters Water Resource Inventory Area (WRIA) in parentheses	Aquatic Plant Removal or Control Recommended Only Between These Dates
North Fork Snoqualmie River (07.0527) - Mouth to Lennox Creek	July 16 - February 28
North Fork Snoqualmie River (07.0527) - Upstream of Lennox Creek	July 16 - February 28
Deep Creek (07.0562)	July 16 - February 28
Illinois Creek (07.0624)	July 16 - February 28
Lennox Creek (07.0596)	July 16 - February 28
Bear Creek (07.0606)	July 16 - February 28
Raging River (07.0384)	August 1 - September 15
South Fork Skykomish River (07.0012) - Mouth to Sunset Falls	August 1 - August 15
South Fork Skykomish River (07.0012) - Upstream of Sunset Falls	August 1 - August 15
Beckler River (07.1413) - Mouth to Boulder Creek	August 1 - August 15
Beckler River (07.1413) - Upstream of Boulder Creek	July 16 - February 28
Rapid River (07.1461) - Mouth to Meadow Creek	August 1 - August 31
Rapid River (07.1461) - Upstream of Meadow Creek	August 1 - February 28
Index Creek (07.1264) - Mouth to Mud Lake Creek	August 1 - August 31
Index Creek (07.1264) - Upstream of Mud Lake Creek including Salmon Creek	July 16 - February 28
Miller River (07.1329) - Mouth to Forks	August 1 - August 15
Miller River (07.1329) - Upstream of Forks	August 1 - August 15
Coney Creek (07.1347)	July 16 - February 28
East Fork Miller River (07.1329) - Mouth to Great Falls Creek	July 16 - August 15
East Fork Miller River (07.1329) - Upstream of Great Falls Creek	July 16 - February 28
Foss River (07.1562) - Mouth to Forks	July 16 - August 31
East Fork Foss River (07.1562) - Mouth to Burn Creek	July 16 - August 15
East Fork Foss River (07.1562) - Upstream of Burn Creek	July 16 - February 28
West Fork Foss River (07.1573) - Mouth to falls at River Mile 2.0	July 16 - August 31
West Fork Foss River (07.1573) - Upstream of falls at River Mile 2.0	July 16 - February 28
West Fork Miller River (07.1335)	July 16 - February 28
Money Creek (07.1300) - Mouth to 0.5 mile upstream of Kimball Creek	August 1 - August 31
Money Creek (07.1300) - Upstream of 0.5 mile upstream of Kimball Creek	August 1 - February 28
Kimball Creek (07.1301)	August 1 - August 31
Tye River (07.0012) - Mouth to Alpine Falls	August 1 - August 31
Tye River (07.0012) - Upstream of Alpine Falls	July 16 - February 28
South Fork Snoqualmie River (07.0467)	July 16 - February 28
Denny Creek (07.0517)	July 16 - February 28
Tolt River (07.0291) - Mouth to forks	August 1 - August 31
North Fork Tolt River (07.0291) - Mouth to Yellow Creek	July 16 - September 15
North Fork Tolt River (07.0291) - Upstream of Yellow Creek	July 16 - February 28
South Fork Tolt River (07.0302) - Mouth to dam	July 16 - September 15
South Fork Tolt River (07.0302) - Upstream of Tolt Reservoir	July 16 - February 28
Yellow Creek (07.0337)	July 16 - February 28
White River (10.0031)	July 16 - August 15
Greenwater River (10.0122)	July 16 - August 15
Kittitas County	July 1 - September 30
Brushy Creek (40.0612)	July 1 - February 28
Colockum Creek (40.0760)	July 1 - October 31
Quilomene Creek (40.0613)	July 1 - October 31
Stemilt Creek (40.0808) - Upstream of falls	July 1 - February 28
Tarpiscan Creek (40.0723)	July 1 - February 28
Tekiason Creek (40.0686)	July 1 - February 28
Whisky Dick Creek (40.0591)	July 1 - February 28
Yakima River (39.0002) - Roza Dam to Teanaway River	August 1 - August 31
Naches River (38.0003) - Tieton River to Bumping River	July 1 - August 15
Little Naches River (38.0852) - Mouth to Matthew Creek	July 16 - August 15
Little Naches River (38.0852) - Upstream of Matthew Creek	July 16 - August 15

Washington Counties and State Waters Water Resource Inventory Area (WRIA) in parentheses	Aquatic Plant Removal or Control Recommended Only Between These Dates
Pileup Creek (38.0932)	July 16 - August 31
Gold Creek (38.MISC)	July 16 - February 28
Swauk Creek (39.1157)	July 16 - September 30
Baker Creek (39.1157)	July 16 - September 30
First Creek (39.1157)	July 16 - September 30
Iron Creek (39.1157)	July 16 - September 30
Williams Creek (39.1157)	July 16 - September 30
Boulder Creek (39.1157)	July 16 - February 28
Cougar Gulch (39.1157)	July 16 - February 28
Lion Gulch (39.1157)	July 16 - February 28
Yakima River (39.0002) - Teanaway River to Easton Dam	August 1 - August 31
Yakima River (39.0002) - Upstream of Easton Dam	August 1 - August 31
Cle Elum River (39.1434) - Mouth to Dam	July 16 - August 31
Cle Elum River (39.1434) - Upstream of Cle Elum Dam	Submit Application
Big Boulder Creek (39.1434MISC)	August 1 - February 28
Camp Creek (39.1434MISC)	August 1 - February 28
Fortune Creek (39.1434MISC)	August 1 - August 15
South Fork Fortune Creek (39.1434MISC)	August 1 - February 28
Howson Creek (39.1434)	July 16 - February 28
Little Salmon Le Sac Creek (39.1482)	August 1 - August 15
Paris Creek (39.1434MISC)	August 1 - February 28
Salmon Le Sac Creek (39.1520)	August 1 - February 28
Kachess River (39.1739) - Upstream of Lake Kachess	Submit Application
Kachess River (39.1739) - Below Dam	July 16 - August 15
Box Canyon Creek (39.1765)	Submit Application
Mineral Creek (39.1792)	August 1 - August 15
Lake Keechelus (39.1842) tributaries	July 16 - August 15
Gold Creek (Lake Keechelus) (39.1842)	Submit Application
Manastash Creek (39.0988)	July 16 - September 30
Naneum Creek (39.0821)	July 16 - September 30
Taneum Creek (39.1081) - Mouth to I-90	July 16 - August 31
Taneum Creek (39.1157) - Upstream of I-90	July 16 - September 30
Teanaway River (39.1236)	July 16 - August 31
NF Teanaway River (39.1260)	Submit Application
Umtanum Creek (39.0553)	July 16 - September 30
Wenas Creek, Below Dam (39.0032)	July 16 - October 15
Wenas Creek, Upstream of Wenas Lake (39.0032)	July 16 - February 28
Other Yakima River tributaries not listed	July 16 - August 31
Kitsap County	July 16 - October 15
Anderson Creek (15.0211)	August 1 - November 15
Barker Creek (15.0255)	August 1 - September 30
Big Beef Creek (15.0389)	August 1 - August 15
Big Scandia Creek (15.0280)	August 1 - September 30
Blackjack Creek (15.0203)	August 1 - September 30
Burley Creek (15.0056)	August 1 - September 30
Chico Creek (15.0229)	August 1 - October 15
Clear Creek (15.0249)	August 1 - September 30
Curley Creek (15.0185)	August 1 - September 30
Dewatto River (15.0420)	August 1 - August 15
Dogfish Creek (15.0285)	August 1 - August 15
Gorst Creek (15.0216)	August 1 - August 15
Grovers Creek (15.0299)	August 1 - August 31
Johnson Creek (15.0387)	August 1 - October 31

Washington Counties and State Waters Water Resource Inventory Area (WRIA) in parentheses	Aquatic Plant Removal or Control Recommended Only Between These Dates
Ollala Creek (15.0107)	August 1 - September 30
Ross Creek (15.0209)	August 1 - November 15
Salmonberry Creek (15.0188)	August 1 - November 30
Seabeck Creek (15.0400)	August 1 - August 15
Steele Creek (15.0273)	August 1 - September 30
Tahuya River (15.0446)	August 1 - August 31
Union River (15.0503)	August 1 - August 31
Klickitat County	July 15 - September 30
Alder Creek (31.0459)	August 1 - September 30
Chapman Creek (31.0192)	August 1 - September 30
Glade Creek (31.0851)	August 1 - September 30
Juniper Canyon Creek (31.0378)	August 1 - September 30
Klickitat River (30.0002) - Mouth to Klickitat hatchery	Submit Application
Klickitat River (30.0002) - Upstream of Klickitat hatchery	Submit Application
Little White Salmon River (29.0131) - Mouth to Cabbage Creek	July 16 - January 31
Little White Salmon River (29.0131) - Upstream of Cabbage Creek	July 16 - January 31
Pine Creek (31.0354)	August 1 - September 30
Rock Creek (31.0014)	August 1 - September 30
Six Prong Creek (31.0465)	August 1 - September 30
White Salmon River (29.0160) - Mouth to Cascade Creek	July 16 - August 15
White Salmon River (29.0160) - Upstream of Cascade Creek	July 16 - August 15
Wood Gulch Creek (31.0263)	August 1 - September 30
Lewis County	August 1 - September 30
Chehalis River (22.0190/23.0190) - Mouth to South Fork Chehalis River	August 1 - August 15
Chehalis River (22.0190/23.0190) - Upstream of South Fork Chehalis River	August 1 - August 31
Newaukum River (23.0882) - Mouth to South Fork	August 1 - August 31
Newaukum River (23.0882) - Upstream of South Fork	August 1 - August 31
Skookunchuck River (23.0761)	August 1 - August 31
Cowlitz River (26.0002)	August 1 - August 15
Cispus River (26.0668) - Mouth to Squaw Creek (26.1010)	August 1 - August 15
Cispus River (26.0668) - Squaw Creek to Chambers Creek	July 16 - February 28
Cispus River (26.0668) - Upstream of Chambers Creek	July 16 - February 28
Yellowjacket Creek (26.0757)	August 1 - August 15
McCoy Creek (26.0766) - Mouth to lower falls	August 1 - August 15
McCoy Creek (26.0766) - Upstream of lower falls	July 16 - February 28
Walupt Creek (26.1010)	Submit Application
Packwood Lake Tributaries	August 16 - September 15
Tilton River (26.0560) - Mouth to North Fork	August 1 - September 30
Tilton River (26.0560) - Upstream of North Fork	August 1 - September 30
Toutle River (26.0227)	August 1 - August 31
North Fork Toutle River (26.0314)	July 16 - August 15
Green River (26.0323)	July 16 - September 30
Deschutes River (13.0028)	July 16 - August 31
Little Deschutes River (13.0110)	July 16 - February 28
Nisqually River (11.0008) - Upstream of Alder Lake	July 16 - September 30
Lincoln County	June 16 - February 28
Columbia River*	See below
Hawk Creek (53.0101) - Mouth to falls	June 16 - August 31
Hawk Creek (53.0101) - Upstream of falls	June 16 - February 28
Upper Crab Creek (42.0001)	June 16 - February 28
Wilson Creek (43.0020)	June 16 - February 28
Mason County	August 1 - October 15
Cloquallum Creek (22.0501)	August 1 - September 30

Washington Counties and State Waters Water Resource Inventory Area (WRIA) in parentheses	Aquatic Plant Removal or Control Recommended Only Between These Dates
Coulter Creek (15.0002)	August 1 - August 31
Dewatto River (15.0420)	August 1 - August 31
Goldsborough Creek (14.0035)	August 1 - October 15
John Creek (16.0253)	August 1 - August 31
Hamma Hamma River (16.0251) - Mouth to falls	August 1 - August 31
Johns Creek (14.0049)	August 1 - August 15
Lilliwaup River (16.0230) - Mouth to falls	August 1 - August 31
Lilliwaup River (16.0230) - Upstream of falls	August 1 - February 28
Mill Creek (14.0029)	August 1 - August 15
Satsop River (22.0360)	August 1 - August 31
Schaerer Creek (16.0326)	August 1 - August 31
Sherwood Creek (14.0094)	August 1 - August 15
Skokomish River (16.0001) - Mouth to Forks	August 1 - August 31
Skokomish River (16.0001) - Upstream of Forks	August 1 - August 31
Tahuya River (15.0446)	August 1 - August 31
Twanoh Creek (14.0134)	August 1 - October 31
Union River (15.0503)	August 1 - August 31
Okanogan County	July 1 - August 15
Aneas Creek (49.0243) - Mouth to falls	July 16 - August 31
Aneas Creek (49.0243) - Upstream of falls	July 1 - March 31
Chewiliken Creek (49.0232) - Mouth to falls	July 16 - August 31
Chewiliken Creek (49.0232) - Upstream of falls	July 1 - March 31
Chiliwist Creek (49.0034) - Mouth to falls	July 16 - August 31
Chiliwist Creek (49.0034) - Upstream of falls	July 1 - March 31
Foster Creek (50.0065)	July 1 - February 28
Methow River (48.0007) - Columbia confluence to Twisp River	July 1 - July 31
Methow River tributaries between Black Canyon Creek and Gold Creek	July 1 - February 28
Black Canyon Creek (48.0015) - Mouth to Left Fork	Submit Application
Black Canyon Creek (48.0015) - Upstream of Left Fork	July 1 - February 28
Gold Creek (48.0104) - Mouth to Foggy Dew Creek	Submit Application
Foggy Dew Creek (48.0153) - Mouth to Foggy Dew Falls	Submit Application
Foggy Dew Creek (48.0153) - Upstream of Foggy Dew Falls	July 1 - February 28
Middle Fork Gold Creek (48.0139)	July 1 - February 28
North Fork Gold Creek (48.0104)	Submit Application
Crater Creek (48.0177) - Mouth to Martin Creek	Submit Application
Crater Creek (48.0177) - Upstream of Martin Creek	July 1 - February 28
Martin Creek (48.0177)	July 1 - February 28
South Fork Gold Creek (48.0105) - Mouth to Rainy Creek	Submit Application
South Fork Gold Creek (48.0105) - Upstream of Rainy Creek	July 1 - February 28
Rainy Creek (48.0105)	July 1 - February 28
McFarland Creek (48.0090) - Mouth to Vinegar Gulch	Submit Application
McFarland Creek (48.0090) - Upstream of Vinegar Gulch	July 1 - February 28
Methow River tributaries between Libby Creek and Beaver Creek	July 1 - February 28
Beaver Creek (48.0307)	Submit Application
Frazer Creek (48.0309)	July 1 - February 28
Lightning Creek (48.0361)	July 1 - February 28
Middle Fork Beaver Creek (48.0307)	July 1 - February 28
South Fork Beaver Creek (48.0342)	July 1 - February 28
Libby Creek (48.0203) - Mouth to Hornet Draw Creek	Submit Application
Libby Creek (48.0203) - Upstream of Hornet Draw	July 1 - February 28
Methow River (48.0007) - Twisp River to Goat Creek	July 1 - July 31
Methow River (48.0007) - Upstream of Goat Creek	July 1 - July 31
Chewuch River (48.0728) - Mouth to Meadow Creek	July 1 - July 31

Washington Counties and State Waters Water Resource Inventory Area (WRIA) in parentheses	Aquatic Plant Removal or Control Recommended Only Between These Dates
Chewuch River (48.0728) - Upstream of Meadow Creek	July 1 - February 28
Early Winters Creek (48.1408) - Mouth to Silver Star Creek	Submit Application
Early Winters Creek (48.1408) - Upstream of Silver Star Creek	July 1 - February 28
Goat Creek (48.1364) - Mouth to 500' upstream of Montana Creek	Submit Application
Goat Creek (48.1364) - 500' Upstream of Montana Creek to Roundup Creek	July 1 - February 28
Goat Creek (48.1364) - Upstream of Roundup Creek	Submit Application
Lost River (48.0592)	July 16 - August 15
Twisp River (48.0374)	July 1 - July 31
Buttermilk Creek (48.0466)	Submit Application
North Creek (48.0674)	Submit Application
North Fork Twisp River (48.0691)	July 1 - February 28
South Creek (48.0641) - Upstream of Louis Creek	July 1 - February 28
South Creek (48.0641) - Mouth to Louis Creek	Submit Application
South Fork Twisp River (48.0698)	July 1 - February 28
Wolf Creek (48.1300)	Submit Application
Myers Creek (60.0517)	July 1 - February 28
Bolster Creek (60.0517)	July 1 - February 28
Ethel Creek (60.0517)	July 1 - February 28
Gold Creek (60.0517)	July 1 - February 28
Mary Ann Creek (60.0517)	July 1 - February 28
North Fork Mary Ann Creek (60.0517)	July 1 - February 28
Okanogan River (49.0019) - Mouth to Zosel Dam	July 1 - August 31
Antoine Creek (49.0294) - Mouth to velocity gradient at river mile 1.0	July 1 - February 28
Antoine Creek (49.0294) - Upstream of falls	July 1 - March 31
Bonaparte Creek (49.0246) - Upstream of falls	July 1 - March 31
Bonaparte Creek (49.0246) - Mouth to Bonaparte Falls at river mile 1.0	July 1 - February 28
Loup Loup Creek (49.0048) - Mouth to Loup Loup Falls at river mile 2.4	July 1 - February 28
Loup Loup Creek (49.0048) - Upstream of Loup Loup Falls at river mile 2.4	July 1 - March 31
Mosquito Creek (49.0321) - Mouth to falls	July 1 - August 31
Mosquito Creek (49.0321) - Upstream of falls	July 1 - March 31
Nine Mile Creek (49.0516)	July 1 - February 28
Omak Creek (49.0138) - Mouth to Mission Falls at river mile 5.4	July 1 - February 28
Omak Creek (49.0138) - Upstream of falls	July 1 - March 31
Salmon Creek (49.0079) - Mouth to diversion	July 1 - August 31
Salmon Creek (49.0079) - Upstream of diversion	July 1 - February 28
Similkameen River (49.0325) - Mouth to Enloe Dam	July 1 - August 31
Similkameen River (49.0325) - Upstream of Enloe Dam	July 1 - October 31
Sinlahekin Creek (49.0349) - Mouth to barrier dam at Connors Lake	July 1 - August 31
Cecile Creek (49.0447)	July 1 - February 28
Chopaka Creek (49.0357)	July 1 - February 28
Toats Coulee Creek (49.0368)	July 1 - February 28
Cougar Creek (49.0368)	July 1 - February 28
Siwash Creek (49.0284) - Falls to headwaters	July 1 - March 31
Siwash Creek (49.0284) - Mouth to falls at river mile 1.4	July 1 - February 28
Tonasket Creek (49.0501) - Mouth to Tonasket Falls at river mile 1.8	July 1 - February 28
Tonasket Creek (49.0501) - Upstream of Tonasket Falls at river mile 1.8	July 1 - March 31
Tunk Creek (49.0211) - Mouth to falls	July 1 - February 28
Tunk Creek (49.0211) - Upstream of falls	July 1 - March 31
San Poil River (52.0004)	June 16 - September 30
West Fork San Poil (52.0192)	June 16 - September 30
Gold Creek (52.0197)	June 16 - February 28
Toroda Creek (60.0410)	July 1 - September 30
Pacific County	August 1 - September 30

Washington Counties and State Waters Water Resource Inventory Area (WRIA) in parentheses	Aquatic Plant Removal or Control Recommended Only Between These Dates
Bear River (24.0689)	August 1 - September 30
Bone River (24.0405)	August 1 - September 30
Chehalis River (22.0190/23.0190)	August 1 - August 15
Columbia River	See below
Chinook River (24.MISC)	August 1 - September 30
Grays River (25.0093)	July 16 - September 15
Naselle River (24.0543)	August 1 - September 15
Nemah River (24.0460)	August 1 - September 30
Niawiakum River (24.0417)	August 1 - September 30
North River (24.0034)	August 1 - September 30
Palix River (24.0426)	August 1 - September 30
Willapa River (24.0251)	August 1 - September 30
Pend Oreille County	July 1 - August 31
Little Spokane River (55.0003)	August 1 - March 15
West Branch Little Spokane River (55.0439)	August 1 - March 15
Harvey Creek (62.0310) - Mouth to Rocky Fork of Harvey Creek	August 1 - August 31
Harvey Creek (62.0310) - Upstream of Rocky Fork of Harvey Creek	July 16 - February 28
Pend Oreille River (62.0002)	Submit Application
Big Muddy Creek (62.0279)	August 1 - March 15
Bracket Creek (62.0815)	August 1 - March 15
Calispel Creek (62.0628)	August 1 - August 31
Exposure Creek (62.0261)	August 1 - August 31
Kent Creek (62.0819)	August 1 - March 15
Le Clerc Creek (62.0415)	August 1 - August 31
Lime Creek (62.0014)	August 1 - March 15
Lodge Creek (62.0859)	August 1 - August 31
Lost Creek (62.0322)	August 1 - March 15
Marshall Creek (62.0842)	August 1 - March 15
Pee Wee Creek (62.0007) - Mouth to falls	August 1 - August 31
Pee Wee Creek (62.0007) - Upstream of falls	August 1 - March 15
Renshaw Creek (62.0310)	August 1 - March 15
Sullivan (O'Sullivan) Creek (62.0074)	August 1 - August 31
North Fork Sullivan Creek (62.0075)	August 1 - August 31
Tributaries of Deep Creek in Pend Oreille County (61.0195)	July 16 - August 15
Currant Creek (61.0249)	July 16 - August 15
Meadow Creek (61.0351)	July 16 - August 15
Rocky Creek (61.0364)	July 16 - August 15
Silver Creek (61.0195)	July 16 - August 15
Smackout Creek (61.0226)	July 16 - August 15
Pierce County	July 16 - August 31
Chambers/Clover Creek Watershed (12.MISC)	July 16 - September 30
Flett Creek (12.0009)	July 16 - October 31
Leach Creek (12.0008)	July 16 - September 30
Nisqually River (11.0008) - Mouth to Alder Lake	July 16 - August 31
Nisqually River (11.0008) - Upstream of Alder Lake	July 16 - September 30
Mashel River (11.0101) - Mouth to Busy Wild Creek	July 16 - September 30
Mashel River (11.0101) - Upstream of Busy Wild Creek	July 16 - September 30
Puyallup River (10.0021) - Mouth to PSE Electron Powerhouse Outfall	July 16 - August 31
Puyallup River (10.0021) - Upstream of PSE Electron Powerhouse Outfall	July 16 - August 15
Carbon River (10.0413)	July 16 - August 15
Cayada Creek (10.0525) - Mouth to falls about 800 feet upstream	July 16 - August 31
Cayada Creek (10.0525) - Upstream of the falls	January 1 - December 31
South Prairie Creek (10.0429)	July 16 - August 15

Washington Counties and State Waters Water Resource Inventory Area (WRIA) in parentheses	Aquatic Plant Removal or Control Recommended Only Between These Dates
Voight Creek (10.0414) - Mouth to falls at River Mile 4.0	July 16 - August 31
Voight Creek (10.0414) - Upstream of falls River Mile 4.0	July 16 - February 28
White River (10.0031)	July 16 - August 15
Clearwater River (10.0080)	July 16 - August 15
Greenwater River (10.0122)	July 16 - August 15
Huckleberry Creek (10.0253)	July 16 - August 15
West Fork White River (10.0186)	July 16 - August 15
Sequalitchew Creek (12.0019)	July 16 - September 30
San Juan County	July 1 - August 31
Cascade Creek (02.0057), Orcas Island - Upstream of lower falls	July 1 - February 28
Cascade Creek (02.0057), Orcas Island, Buck Bay to falls located approximately 300 feet above mouth	July 1 - October 31
Doe Creek (02.MISC), San Juan Island, Westcott Bay to falls (approximately 250 feet from mouth)	June 16 - October 15
False Bay Creek (02.MISC) - San Juan Island; Mouth to lake	July 1 - October 31
Glenwood Springs, Orcas Island; direct tributary to Eastsound Bay	July 1 - October 15
Moran Creek (02.MISC) - Orcas Island; from Cascade Lake delta upstream 1/4 mile	July 1 - October 15
Unnamed Creek (02.0041) - San Juan Island; Mouth to lake	July 1 - October 15
Skagit County	August 1 - September 15
Granite Creek (04.2313) - Upstream of East Creek	July 16 - February 28
North Fork Stillaguamish River (05.0135) - Mouth to Squire Creek	August 1 - August 15
North Fork Stillaguamish River (05.0135) - Squire Creek to Cascade Creek	August 1 - August 15
North Fork Stillaguamish River (05.0135) - Upstream of Cascade Creek	July 16 - February 28
Samish River (03.0005)	August 1 - September 15
Skagit River (03.0176/04.0176)	Submit Application
Baker River (04.0435) - Mouth to Baker Dam	Submit Application
Cascade River (04.1411)	Submit Application
Day Creek (03.1435)	July 16 - February 28
Lookout Creek (04.1447)	July 16 - February 28
Sibley Creek (04.1481)	July 16 - February 28
Day Creek (03.0299) - Mouth to Rocky Creek	Submit Application
Day Creek (03.0299) - Upstream of Rocky Creek	August 1 - February 28
Finney Creek (04.0392) - Mouth to Big Fir Creek	Submit Application
Finney Creek (04.0392) - Upstream of Big Fir Creek	July 16 - February 28
Illabot Creek (04.1346)	Submit Application
Sauk River (04.0673) - Mouth to Forks	Submit Application
Sauk River (04.0673) - Upstream of Forks	August 1 - August 15
Suiattle River (04.0710)	Submit Application
Wiseman Creek (03.0280) - Mouth to SR20	Submit Application
Wiseman Creek (03.0280) - Upstream of SR20	July 16 - February 28
South Fork Nooksack River (01.0246) - Mouth to falls at River Mile 30	Submit Application
South Fork Nooksack River (01.0246) - Falls at River Mile 30 to Wanlick Creek	Submit Application
South Fork Nooksack River (01.0246) - Upstream of Wanlick Creek	Submit Application
Skamania County	July 15 - September 15
Columbia River	See below
Cispus River (26.0668)	August 1 - August 15
Cispus River (26.0668) tributaries located in Skamania County	August 1 - October 31
East Fork Lewis River (27.0173) - Lucia Falls to Sunset Falls	August 1 - February 28
East Fork Lewis River (27.0173) - Upstream of Sunset Falls	August 1 - February 28
Green River (26.0323) (Tributary of North Fork Toutle River)	July 16 - September 30
Hamilton Creek (28.0303)	August 1 - August 31
Hardy Creek (28.0303)	August 1 - August 31
Little White Salmon River (29.0131) - Mouth to Hatchery	July 16 - August 15
Little White Salmon River (29.0131) - Hatchery to Cabbage Creek	July 16 - January 31

Washington Counties and State Waters Water Resource Inventory Area (WRIA) in parentheses	Aquatic Plant Removal or Control Recommended Only Between These Dates
Little White Salmon River (29.0131) - Upstream of Cabbage Creek	July 16 - January 31
North Fork Lewis River (27.0168) - Merwin Dam to Lower Falls Canyon Creek (27.0442)	July 16 - August 15 July 16 - February 28
North Fork Lewis River (27.0168) - Upstream of Lower Falls	July 16 - February 28
Washougal River (28.0159) - Mouth to Stebbins Creek	August 1 - August 31
Washougal River (28.0159) - Upstream of Stebbins Creek	August 1 - August 31
White Salmon River (29.0160) - Mouth to Cascade Creek	July 16 - August 15
White Salmon River (29.0160) - Upstream of Cascade Creek	July 16 - August 15
Wind River (29.0023)	August 1 - August 15
Woodward Creek (28.0298)	August 1 - August 31
Snohomish County	July 16 - September 15
Lake Washington tributaries	August 1 - August 15
Sauk River (04.0673) - Mouth to Forks	August 1 - August 15
Sauk River (04.0673) - Upstream of Forks	August 1 - August 15
Suiattle River (04.0710)	August 1 - August 15
Snohomish River (07.0012) - Mouth to Highway 9	August 1 - October 31
Snohomish River (07.0012) - Upstream of Highway 9	August 1 - August 15
Pilchuck River (07.0125) - Mouth to City of Snohomish diversion dam	August 1 - August 31
Pilchuck River (07.0125) - City of Snohomish diversion dam to Boulder Creek	August 1 - September 15
Pilchuck River (07.0125) - Upstream of Boulder Creek	August 1 - September 15
Skykomish River (07.0012) - Mouth to forks	August 1 - August 15
Deer Creek (05.0173) - Mouth to stream mile 0.5	August 1 - August 31
Deer Creek (05.0173) - Upstream of stream mile 0.5	August 1 - February 28
North Fork Skykomish River (07.0982) - Mouth to Bear Creek Falls	August 1 - August 31
North Fork Skykomish River (07.0982) - Bear Creek Falls to Deer Falls	August 1 - August 31
North Fork Skykomish River (07.0982) - Deer Falls to West Cady Creek	August 1 - February 28
North Fork Skykomish River (07.0982) - Upstream of West Cady Creek	August 1 - February 28
Howard Creek (07.1042)	July 16 - February 28
Silver Creek (07.1053) - Mouth to Lake Gulch	August 1 - August 31
Silver Creek (07.1053) - Upstream of Lake Gulch	August 1 - February 28
Troublesome Creek (07.1085)	August 1 - February 28
West Fork Troublesome Creek (07.1092)	August 1 - August 31
South Fork Skykomish River (07.0012) - Mouth to Sunset Falls	August 1 - August 15
Beckler River (07.1413) - Mouth to Boulder Creek	August 1 - August 15
Beckler River (07.1413) - Upstream of Boulder Creek	July 16 - February 28
Rapid River (07.1461) - Mouth to Meadow Creek	August 1 - August 31
Rapid River (07.1461) - Upstream of Meadow Creek	August 1 - February 28
Sultan River (07.0881) - Mouth to Diversion Dam at river mile 9.4	August 1 - August 15
Sultan River (07.0881) - Diversion Dam to Elk Creek	July 16 - February 28
Sultan River (07.0881) - Upstream of Elk Creek	July 16 - February 28
Wallace River (07.0940) - Mouth to Wallace Falls	August 1 - August 31
Wallace River (07.0940) - Upstream of Wallace Falls	August 1 - February 28
Olney Creek (07.0946) - Mouth to Olney Falls	August 1 - August 31
Olney Creek (07.0946) - Upstream of Olney Falls	August 1 - February 28
Snoqualmie River Mouth to Falls (07.0219)	August 1 - August 15
All other Snohomish River tributaries	August 1 - August 31
Stillaguamish River (05.0001) - Mouth to forks	August 1 - August 31
North Fork Stillaguamish River (05.0135) - Mouth to Squire Creek	August 1 - August 15
North Fork Stillaguamish River (05.0135) - Squire Creek to Cascade Creek	August 1 - August 15
North Fork Stillaguamish River (05.0135) - Upstream of Cascade Creek	July 16 - February 28
South Fork Stillaguamish River (05.0001) - Mouth to Deer Creek	August 1 - August 15
South Fork Stillaguamish River (05.0001) - Upstream of Deer Creek	August 1 - August 15
Spokane County	June 16 - August 31

Washington Counties and State Waters Water Resource Inventory Area (WRIA) in parentheses	Aquatic Plant Removal or Control Recommended Only Between These Dates
Latah Creek (56.0003)	June 16 - August 31
Little Spokane River (55.0600) - Mouth to Deer Creek	June 16 - August 31
Little Spokane River (55.0600) - Upstream of Deer Creek	June 16 - August 31
Spokane River (57.0001)	June 16 - August 31
Stevens County	July 16 - August 31
Columbia River	See below
Big Sheep Creek (61.0150)	July 16 - August 15
Colville River (59.0002) - Mouth to the Falls	July 16 - September 30
Colville River (59.0002) - Upstream of the Falls	July 16 - September 30
Deep Creek (61.0195)	July 16 - August 15
Onion Creek (61.0098)	July 16 - August 15
Sheep Creek (59.0861)	July 16 - September 30
Lake Roosevelt tributaries from the mouth of the Spokane River to mouth of the Colville River	July 16 - February 28
Lake Roosevelt tributaries from the mouth of the Colville River north to the B.C. Border	July 16 - February 28
Tributaries of Little Spokane River (55.0600)	June 16 - August 31
Calispel Creek (62.0628)	August 1 - August 31
Other tributaries to the Pend Oreille River in Stevens County	July 1 - August 31
Thurston County	July 16 - September 15
Cedar Creek (23.0570)	August 1 - September 30
Chehalis River (22.0190/23.0190) - Upstream of Porter Creek	August 1 - August 15
Skookumchuck River (23.0761) - Mouth to Skookumchuck Reservoir	August 1 - August 31
Skookumchuck River (23.0761) - Upstream of Skookumchuck Reservoir	August 1 - August 31
Deschutes River (13.0028) - Mouth to Deschutes Falls	July 16 - August 31
Deschutes River (13.0028) - Upstream of Deschutes Falls	July 16 - August 31
Ellis Creek (13.0022)	May 16 - September 30
Little Deschutes River (13.0110)	July 16 - February 28
McLane Creek (13.0138)	August 1 - October 31
Percival Creek (13.0029)	July 16 - August 31
Nisqually River (11.0008)	July 16 - August 31
Tributaries of Nisqually River (11.0008)	July 16 - August 31
Porter Creek (23.0543)	August 1 - September 30
Schneider Creek (14.0009)	August 1 - October 31
Waddell Creek (23.0677)	August 1 - September 30
Woodard Creek (13.0012)	July 16 - August 31
Woodland Creek (13.0006)	July 16 - September 30
Wahkiakum County	July 16 - September 15
Columbia River	See below
Abernathy Creek (25.0297)	July 16 - September 15
Deep River (25.0011)	July 16 - September 15
Elochoman River (25.0236)	July 16 - September 15
Grays River (25.0093)	July 16 - September 15
Mill Creek (25.0284)	July 16 - September 15
Naselle River (24.0543)	July 16 - September 15
Skamokawa Creek (25.0194)	July 16 - September 15
Walla Walla County	July 16 - September 30
Walla Walla River (32.0008) - Mouth to Oregon state line	July 16 - September 15
Mill Creek (32.1436) - Mouth to Oregon state line	August 1 - August 15
Touchet River (32.0097) - Mouth to Forks	August 1 - August 15
North Fork Touchet/Wolf Fork (32.0761)	Submit Application
South Fork Touchet (32.0708)	Submit Application
Whatcom County	July 16 - August 15
Damfino Creek (00.0032)	July 16 - August 31
Nooksack River (01.0120)	Submit Application

Washington Counties and State Waters Water Resource Inventory Area (WRIA) in parentheses	Aquatic Plant Removal or Control Recommended Only Between These Dates
Cascade Creek (02.0057) - Mouth to FR 37	Submit Application
Cascade Creek (02.0057) - Upstream of FR 37	July 16 - February 28
Middle Fork Nooksack River (01.0339) - Mouth to City of Bellingham Diversion Dam	Submit Application
Middle Fork Nooksack River (01.0339) - Upstream of City of Bellingham Diversion Dam	Submit Application
North Fork Nooksack River (01.0120) - Mouth to Nooksack Falls	Submit Application
North Fork Nooksack River (01.0120) - Upstream of Nooksack Falls	Submit Application
Barometer Creek (01.0513)	July 16 - February 28
Ruth Creek (01.0531)	July 16 - February 28
Swamp Creek (01.0518)	July 16 - February 28
Wells Creek (02.0057)	Submit Application
Bar Creek (01.0500)	July 16 - February 28
South Fork Nooksack (01.0246) - Mouth to Wanlick Creek	Submit Application
South Fork Nooksack (01.0246) - Upstream of Wanlick Creek	Submit Application
Samish River (03.0005)	July 16 - August 15
Skagit River (03.0176/04.0176)	Submit Application
Baker River (04.0435) - Mouth to Baker Lake Dam (04.0435)	Submit Application
Baker River (04.0435) - Baker Lake to national park boundary	Submit Application
Boulder Creek (04.0499)	July 16 - February 28
Park Creek (04.0506) - Mouth to fish passage barrier at river mile 1.6	Submit Application
Park Creek (04.0506) - Upstream of river mile 1.6	July 16 - February 28
Swift Creek (04.0509) - Mouth to Rainbow Creek	Submit Application
Swift Creek (04.0509) - Upstream of Rainbow Creek	July 16 - February 28
Ross Lake (03.0176/04.0176) tributaries	Submit Application
Ruby Creek (04.2199)	Submit Application
Canyon Creek (04.2458) - Mouth to Barron Creek	Submit Application
Canyon Creek (04.2458) - Upstream of Barron Creek and tributaries	October 1 - February 28
Barron Creek (04.2591)	October 1 - February 28
Boulder Creek (04.2478) - Mouth to 300 feet upstream	Submit Application
Boulder Creek (04.2478) - 300 feet upstream of mouth to headwaters	October 1 - February 28
Friday Creek (04.2549) - Mouth to 300 feet upstream	Submit Application
Friday Creek (04.2549) - 300 feet upstream of mouth to headwaters	October 1 - February 28
Holmes Creek (04.2473) - Mouth to 300 feet upstream	Submit Application
Holmes Creek (04.2473) - 300 feet upstream of mouth to headwaters	October 1 - February 28
Mill Creek (04.2504) - Mouth to 300 feet upstream	Submit Application
Mill Creek (04.2504) - 300 feet upstream of mouth to headwaters	October 1 - February 28
Nickol Creek (04.2476) - Mouth to 300 feet upstream	Submit Application
Nickol Creek (04.2476) - 300 feet upstream of mouth to headwaters	October 1 - February 28
North Fork Canyon Creek (04.2583) - Mouth to Elk Creek	Submit Application
Cascade Creek (05.2584)	October 1 - February 28
North Fork Canyon Creek (04.2583) - Upstream of Elk Creek	October 1 - February 28
Slate Creek (04.2557) - Mouth to falls at River Mile 0.6	Submit Application
Slate Creek (04.2557) - Upstream of falls at River Mile 0.6	October 1 - February 28
Granite Creek (04.2313) - Mouth to East Creek	Submit Application
Granite Creek (04.2313) - Upstream of East Creek and tributaries	October 1 - February 28
Saar Creek (00.0003)	August 1 - September 30
Silesia Creek (00.0042) - Canadian Border to Middle Fork	July 16 - August 15
Silesia Creek (00.0042) - Middle Fork to national park boundary	July 16 - February 28
Rapid Creek (00.0048)	July 16 - February 28
West Fork Silesia Creek (00.0044)	July 16 - February 28
Winchester Creek (00.0045)	July 16 - February 28
Whitman County	July 16 - December 15
Snake River (35.0002)	See below
Alkali Flats Creek (35.0570)	July 16 - December 15

Washington Counties and State Waters Water Resource Inventory Area (WRIA) in parentheses	Aquatic Plant Removal or Control Recommended Only Between These Dates
Almota Creek (35.1017)	July 16 - December 15
Little Almota Creek (35.1018)	July 16 - December 15
Palouse River (34.0003) - Mouth to Palouse Falls	July 16 - September 30
Palouse River (34.0003) - Upstream of Palouse Falls	July 16 - February 28
Penewawa Creek (35.0916)	July 16 - December 15
Wawawi Canyon Creek (35.1165)	July 16 - December 15
Yakima County	June 1 - September 15
Glade Creek (31.0851)	August 1 - September 30
Klickitat River (30.0002)	Submit Application
Yakima River (37.0002/38.0002/39.0002) - Mouth to Roza Dam	June 1 - September 15
Ahtanum Creek (37.1382)	June 16 - September 30
North Fork Ahtanum Creek (37.1382)	Submit Application
South Fork Ahtanum Creek (37.1382)	Submit Application
Naches River (38.0003) - Mouth to Tieton River	July 1 - October 15
Naches River (38.0003) - Upstream of mouth of Tieton River to Bumping River	July 1 - August 15
Bumping River (38.0998)	July 16 - August 15
American River (38.1000)	Submit Application
Gold Creek (38.MISC)	July 16 - February 28
Kettle Creek (38.1033)	Submit Application
Miner Creek (38.1027)	July 16 - February 28
Morse Creek (38.1072) - Mouth to SR410 Crossing	August 1 - August 15
Morse Creek (38.1072) - Upstream of SR410 Crossing	August 1 - February 28
Rock Creek (38.MISC)	July 16 - February 28
Timber Creek (38.1062)	August 1 - August 15
Union Creek (38.1045) - Upstream of 500' above falls	August 1 - February 28
Union Creek (38.1045) - Mouth to 500' above falls	Submit Application
Other American River tributaries not listed	August 1 - February 28
Deep Creek (38.MISC)	Submit Application
Copper Creek (38.MISC)	August 1 - August 15
Cowiche Creek (38.0005) - Mouth to South Fork Cowiche Creek	July 1 - September 30
North Fork Cowiche Creek (38.0008)	July 1 - February 28
South Fork Cowiche Creek (38.0031) - Mouth to Reynolds Creek	July 1 - September 30
South Fork Cowiche Creek (38.0031) - Upstream of Reynolds Creek	July 16 - October 31
Granite Creek (38.MISC)	August 1 - August 15
Little Naches River (38.0852) - Mouth to Matthews Creek	July 16 - August 15
Little Naches River (38.0852) - Upstream of Matthews Creek	July 16 - August 15
Crow Creek (38.0858)	July 16 - August 15
Nile Creek (38.0692)	July 16 - October 15
Rattlesnake Creek (38.0518)	July 16 - August 15
Tieton River (38.0166) - Mouth to Rimrock Dam	July 1 - August 31
North Fork Tieton River (38.0291) - Below Clear Lake Dam	Submit Application
North Fork Tieton River (38.0291) - Upstream of Clear Lake	July 1 - August 15
Clear Creek (38.0317)	July 16 - February 28
South Fork Tieton River (38.0374) - Below South Fork Falls	Submit Application
South Fork Tieton River (38.0374) - Upstream of South Fork Falls	July 16 - February 28
Indian Creek (38.0302)	Submit Application
Tributaries of Tieton River below Rimrock Dam	July 16 - February 28
Umtanum Creek (39.0553)	July 16 - September 30
Wenas Creek (39.0032)	July 16 - October 15
Other Yakima River tributaries	July 16 - August 31
Columbia River	-
Mouth to the I-205 Bridge	August 1 - March 31
I-205 Bridge to Bonneville Dam	July 16 - September 15

Washington Counties and State Waters Water Resource Inventory Area (WRIA) in parentheses	Aquatic Plant Removal or Control Recommended Only Between These Dates
Bonneville Dam to Snake River	July 16 - February 28
Snake River to Priest Rapids Dam	July 16 - September 30
Priest Rapids Dam to Mouth of Crab Creek	July 16 - February 28
Mouth of Crab Creek to Wanapum Dam	July 16 - September 30
Wanapum Dam to the SR 285 bridge in South Wenatchee	July 16 - February 28
SR 285 bridge in South Wenatchee to the SR 2 bridge	July 16 - September 30
SR 2 bridge to one mile downstream of the Chelan River	July 16 - February 28
From one mile downstream of the Chelan River to the SR 97 bridge	July 16 - September 30
From SR 97 bridge to Chief Joseph Dam	July 16 - February 28
Chief Joseph Dam to Grand Coulee Dam	June 16 - March 31
Grand Coulee Dam to Canadian border	Submit Application
All Columbia River tributaries	See county listings
Snake River	-
Mouth to Ice Harbor Dam	July 16 - September 30
Ice Harbor Dam to Mouth of Clearwater River	July 16 - March 31
Mouth of Clearwater River to State Line	August 1 - August 31
All Snake River tributaries	See county listings
Lakes	Use County Work Times
Marine waters, Strait of Juan de Fuca, Puget Sound, and Hood Canal	Use County Work Times



Proposed Amendments to Title 14A

Environmental Protection Regulations

14A.154.000 - Fish and Wildlife Habitat Areas

Chapter 14A.154

FISH AND WILDLIFE HABITAT AREAS

Sections:

- 14A.154.010 Purpose and Intent.
- 14A.154.020 Designation of Fish and Wildlife Habitat Areas
- 14A.154.030 Habitat Protection Standards.
- 14A.154.040 Title and Plat Notification.
- 14A.154.050 Habitat Protection for Rivers and Streams.
- 14A.154.060 Habitat Protection for Lakes.
- 14A.154.070 Habitat Protection for Ponds.
- 14A.154.090 Provisions for Buffers, Where Required.

14A.154.010 - Purpose and Intent

Many land use activities can impact the habitats of fish and wildlife. Where areas of critical fish and wildlife habitat are subject to development, land use shall be managed to protect critical habitats. Managing land use to protect critical habitats is intended to allow proposed development to occur in a manner that is sensitive to the habitat needs of critical fish and wildlife species. The purpose of this Chapter is to identify critical fish and wildlife habitat species and habitats and establish habitat protection procedures and mitigation practices that are designed to achieve no "net loss" of species and habitat due to new development or other regulated activities.

As a necessary first step in achieving the necessary protection of critical fish and wildlife species, it is the intent of this Chapter to:

- A. Define and identify critical fish and wildlife species and habitats;
- B. emphasize and encourage education, information and voluntary action to enhance, protect, rehabilitate, and restore critical fish and wildlife species and habitats;
- C. rely primarily upon existing procedures and laws, such as the State Environmental Policy Act, RCW 43.21C, the City's Shoreline Use Regulations and the Shorelines Management Act, RCW 90.58, that directly or indirectly, protect fish and wildlife species and habitats; and
- D. establish buffers adjacent to rivers, streams, and other identified critical habitat areas and locations to protect critical fish and wildlife habitats.

It is not intended that this Chapter repeal, abrogate, or impair any existing law or regulations. If the buffering provisions of this Chapter conflict with any existing City law or regulation, the more stringent shall apply.
(Ord. 362 § 3 (part), 2004.)

14A.154.020 - Designation of Critical Fish and Wildlife Habitat Areas

- 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).

(Ord. 362 § 3 (part), 2004.)

14A.154.030 - Habitat Protection Standards

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.

(Ord. 362 § 3 (part), 2004.)

14A.154.040 - Title and Plat Notification

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:~~

(Ord. 362 § 3 (part), 2004.)

14A.154.050 - Habitat Protection for Rivers and Streams

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 anadromous fish and, therefore, requiring a larger buffer protection. Critical fishery rivers and streams include:~~

<u>Stream Name</u>	<u>WRIA#</u>	<u>Buffer Width In Feet</u>	<u>Tribe Identifying</u>
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.

(Ord. 362 § 3 (part), 2004.)

14A.154.060 - Habitat Protection for Lakes

- A. Regulated activities proposed on lakes that are urban in character will not be subject to the buffering requirements of this Chapter. The following lakes are urban in character:
- American
 - Gravelly
 - Louise
 - Steilacoom

For proposed regulated activities on lakes that are subject to the State Shoreline Management Act, habitat protection shall be provided through education, voluntary agreements, and existing laws as referenced in 14A.154.030.B, and regulation via the City's Shoreline Master Program and Shoreline Management Regulations.

- B. Regulated activities proposed on lakes that are not subject to the State Shoreline Management Act shall be subject to a 35 foot buffer requirement. The buffer, consisting of undisturbed natural vegetation, shall extend landward from the ordinary high water mark of the water body. Existing laws as referenced in Section 14A.154.030.B may also affect such proposals.

(Ord. 362 § 3 (part), 2004.)

14A.154.070 - Habitat Protection for Ponds

Regulated activities proposed on ponds will not be subject to the buffering requirements of this Section. Habitat protection for ponds shall be provided through education, voluntary agreements and existing laws as referenced in 14A.154.030.B. Ponds shall be regulated as wetlands where appropriate. (Ord. 362 § 3 (part), 2004.)

14A.154.090 - Provisions for Fish and Wildlife, Habitat Buffers, Where Required

- A. Building Setback and Construction near Buffer. A minimum setback of eight (8) feet from the buffer shall be required for construction of any impervious surface(s) greater than 120 square feet of base coverage. Clearing, grading, and filling within eight feet of the buffer shall only be allowed when the applicant can demonstrate that vegetation within the buffer will not be damaged.
- B. Marking of the Buffer Area. The edge of the buffer area shall be clearly staked, flagged, and fenced prior to and through completion of construction. The buffer boundary markers shall be clearly visible, durable, and permanently affixed to the ground.
- C. Fencing from Farm Animals. The Director shall determine if fencing is necessary to protect the functions and values of the critical area. If found to be necessary, the Director shall condition any permit or authorization issued pursuant to this Chapter to require the applicant to install a permanent fence around the habitat conservation area or buffer, when fencing will prevent future impacts to the habitat conservation area. The applicant shall be required to install a permanent fence around the habitat conservation area or buffer when domestic grazing animals are present or may be introduced on site. Fencing installed as part of a proposed activity or as required in this subsection shall be designed so as not to interfere with species migration, including fish runs, and shall be constructed in a manner that minimizes habitat impacts.
- D. Enhancements to natural buffers consistent with the education program (such as re-vegetation or nest boxes) are allowed.
- E. Allowable Activities Within Buffers. The following activities may occur within the buffer after notification to the Department, provided that any other required permits are obtained.
 - 1. Removal of diseased trees and trees that present an imminent threat to properties. The Director may require a written report by a registered landscape architect, certified nursery professional, or certified arborist assessing the condition of any tree that is purported to be diseased or hazardous.
 - 2. Repair of existing fences.
 - 3. Construction, reconstruction, remodeling, or maintenance of docks and bulkheads as authorized and pursuant to the Shoreline Management Regulations.
 - 4. Construction of a pervious path for purposes of private access to the shoreline.
 - 5. Trimming of vegetation for purposes of providing view corridors, provided that trimming shall be limited to view corridors of 20 feet or less and provided that benefits of the buffer to fish and wildlife habitat are not reduced. Trimming shall be limited to pruning of branches and vegetation. Trimming shall not include felling or removal of trees.
 - 6. Construction of public trails.

7. Roadways, bridges, rights-of-way, and utility lines where no feasible alternative exists, and where the development minimizes impacts on the stream and buffer area. Clear documentation explaining the lack of alternatives and measures taken to minimize impacts on the critical area and buffer shall be provided to the Community Development Department prior to approval.

(Ord. 362 § 3 (part), 2004.)

DRAFT

14A.158.000 - Flood Hazard Areas

Chapter 14A.158

FLOOD HAZARD AREAS

Sections:

- 14A.158.010 Purpose.
- 14A.158.020 Designation
- 14A.158.030 Protection

14A.158.010 - Purpose

The purpose of this section is to:

- A. Promote the general health, welfare and safety of the city's residents.
- 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
- 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 and control projects.
- H. Ensure that those who occupy the areas of special flood hazard assume responsibility for their actions.
(Ord. 362 § 3 (part), 2004.)

14A.158.020 - Designation

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

(Ord. 362 § 3 (part), 2004.)

14A.158.030 - Protection

All development in Areas of Special Flood Hazard shall be regulated according to the City's Site Development Regulations, and Section 18A.40.100, Flood Hazard Overlay, of the City's Land Use and Development Code. (Ord. 362 § 3 (part), 2004.)

14A.162.000 - Wetlands Areas

CHAPTER 14A.162

WETLANDS AREAS

14A.162.020 - Designation of Wetland Areas

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

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- 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).~~

(Ord. 362 § 3 (part), 2004.)

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.

14A.162.030 - Wetland Categories

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. (Ord. 362 § 3 (part), 2004.)

14A.162.080 - Protection Standards - Establishing Buffers

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

<u>Wetland Category</u>	<u>Buffer Width</u>
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 ¼ 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

Wetland Category	Buffer width (in feet) based on habitat score			
	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	<ul style="list-style-type: none"> • Direct lights away from wetland
Noise	<ul style="list-style-type: none"> • 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	<ul style="list-style-type: none"> • 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
Stormwater runoff	<ul style="list-style-type: none"> • 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	<ul style="list-style-type: none"> • Infiltrate or treat, detain, and disperse into buffer new runoff from impervious surfaces and new lawns
Pets and human disturbance	<ul style="list-style-type: none"> • 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	<ul style="list-style-type: none"> • Use best management practices to control dust
Disruption of corridors or connections	<ul style="list-style-type: none"> • 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.
- (Ord. 362 § 3 (part), 2004.)

14A.162.090 - Protection Standards for Allowing Regulated Activities in Wetlands and Buffers

- 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 G~~ 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. In 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.

(Ord. 362 § 3 (part), 2004.)

14A.162.100- Mitigation

- A. All activities in wetlands and/or buffers shall be mitigated according to this Section. ~~Usually, Mitigation 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.~~
- ~~G. 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]:

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

^[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.

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

§ 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.

(Ord. 362 § 3 (part), 2004.)

DRAFT

14A.165.000 - Definitions - Critical Areas

Chapter 14A.165

DEFINITIONS

Section:

14A.165.010 Definitions

14A.165.010 - Definitions

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 structure.

"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.

"Historic Structure" means a structure that:

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

B. Has been certified to contribute to the historical significance of a registered historic district.

"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.

“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.

"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. (Ord. 362 § 3 (part), 2004.)

Proposed Amendments to Title 18A.40.100

Flood hazard Overlay Regulations

18A.40.100 - Flood Hazard Overlay

18A.40.110 - Purpose - Flood Hazard Overlay

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.

18A.40.120 - Applicability - Flood Hazard Overlay

A. Establishment of Flood Zones. This section shall apply to tThe 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.

(Ord. 264 § 1 (part), 2001.)

18A.40.130 - Administration - Flood Hazard Overlay

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 altered 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.

BC. 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.

CD. 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.

DE. 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.

EE. 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.

(Ord. 264 § 1 (part), 2001.)

18A.40.140 - Alteration of Watercourses - Flood Hazard Overlay

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.

(Ord. 264 § 1 (part), 2001.)

Revision 11/12/15 with FEMA comments.
Draft to Planning Commission

18A.40.150 - Interpretation of FIRM Boundaries

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.

(Ord. 264 § 1 (part), 2001.)

18A.40.160 - Variances - Flood Hazard Overlay

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.

(Ord. 264 § 1 (part), 2001.)

18A.40.170 - Provisions for Flood Hazard Reduction

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 by a registered architect or engineer 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;

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

c. 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 commenced; 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 that do not increase the building's dimensions.

~~(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.

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.

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.

(Ord. 264 § 1 (part), 2001.)

18A.40.180 – Allowable Activities Within the Regulatory Floodplain

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.

18A.40.190 - Definitions

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