ORDINANCE NO. 2367

AN ORDINANCE adopting new standards for critical areas including new general provisions, regulations for critical aquifer recharge areas, regulations for frequently flooded areas, and regulations for geologically hazardous areas.

THE COUNCIL OF THE CITY OF CAMAS DO ORDAIN AS FOLLOWS:

I.

The Council makes the following finds:

A. The City commenced review of its Critical Areas ordinances by holding special meetings with stakeholders such as developers, business park industries, large land owners, and neighborhood associations.

B. The City thereafter formed a Project Team consistent of a consultant, planning and engineering staff, one planning council member, and one City council member. Numerous meetings were held in 2002 and early 2003 by the Project Team.

C. Town Hall meetings were held in February of 2002, and December of 2002 to discuss the proposed Critical Areas Ordinance.

D. The City retained outside consultants to review the Frequently Flooded Areas ordinance and the Geologically Hazardous Areas Ordinance for purposes of assuring that the best available science standards were satisfied.

E. The Planning Commission conducted a public hearing on the proposed ordinances on April 1, 2003, at which members of the public were allowed to testify and provide input.

F. On May 16, 2003, the responsible official under SEPA issued a non-project action determination of non-significance.

G. The City Council conducted public hearings on the proposed ordinances on May 12, 2003, and on October 26, 2003. In addition, the City Council conducted individual chapter reviews at meetings held on May 19, 2003, June 16, 2003, July 7, 2003, and August 4, 2003.

H. The proposed ordinances were submitted to the Department of Community

Trade and Economic Development on September 23, 2003, for a sixty (60) day review and comment period required under State law.

II.

There is hereby added to Title 16 a new chapter entitled 16.50 - General Provisions, in the form attached hereto as Exhibit "A" and by this reference incorporated herein.

III.

There is hereby added to Title 16 a new chapter entitled 16.70 - Critical Aquifer Recharge Areas - in the form attached hereto as Exhibit "A" and by this reference incorporated herein.

IV

There is hereby added to Title 16 a new chapter entitled 16.80 - Frequently Flooded Areas - in the form attached hereto as Exhibit "A" and by this reference incorporated herein.

V

There is hereby added to Title 16 a new chapter entitled 16.90 - Geologically Hazardous Areas - in the form attached hereto as Exhibit "A" and by this reference incorporated herein.

VI

This ordinance shall take force and be in effect five (5) days from and after its publication according to law.

VII

Section 18.31.060 of the Camas Municipal Code is hereby repealed.

VIII

In the event of any conflict between this ordinance and the provisions of any ordinance previously adopted, the provisions of this ordinance shall prevail.

PASSED by the Council and APPROVED by the Mayor this 9th day of February, 2004.

SIGNED: Paul Dennis
Mayor

ATTEST: Joan M Durgin
Clerk

APPROVED as to form:

[signature]
City Attorney

CITY OF CAMAS

616 Northeast Fourth Avenue
P.O. Box 1055
Camas, Washington 98607
http://www.ci.camas.wa.us

Joan Durgin
ordinance file

Date Published: May 16, 2003

To Whom It May Concern:

Please find enclosed a Determination of Nonsignificance (DNS) issued pursuant to the State Environmental Policy Act (SEPA) Rules, Chapter 197-11, Washington Administrative Code. The enclosed review comments reflect evaluation of the environmental checklist by the lead agency as required by WAC 197-11-330(1)(a)(i).

Written comments may be submitted on this determination within fourteen (14) days of its issuance, after which the DNS will be reconsidered in light of the comments received.

Please address all correspondence to:

City of Camas
Department of Public Works
616 NE 4th Avenue
Camas WA 98607

Distribution:

Proponent
Parks & Recreation Commission
Department of Ecology (2)
US Army Corps of Engineers
Department of Natural Resources
Department of Natural Resources, Southwest Region
Department of Fish and Wildlife
Bureau of Indian Affairs
Cowlitz and Chinook Indian Representative
Cultural Resource Program, Yakima Indian Nation
Cowlitz Indian Tribe South Zone Archaeologist

Distribution (continued):

Washington Office of Archaeology & Historic Preservation
Department of Transportation
Southwest Air Pollution Control Authority
Clark County Community Development: Planning
C-Tran
Clark Public Utilities
Clark County Natural Resources Council
Clark County ESA Program
Lacamas Shores Homeowners Association
Camas School District
Ken Haas, Officer in Charge, Underwriters Laboratories, Inc.
U.C.A.N.
Lacamas Lake Program Manager/Department of Community Development
Post Publications
Mayor Dean Dossett
City Administrator, Lloyd Halverson
Camas Council Members (7)
Camas Planning Commission Members (7)
Finance Director Joan Durgin
Police Chief Don Chaney
Fire Chief Dave Artz
Camas Public Library

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STATE ENVIRONMENTAL POLICY ACT

DETERMINATION OF NON-SIGNIFICANCE

CASE NO: **SC05 – 03 –01 Critical Areas Ordinance**

APPLICANT: **City of Camas**

REQUEST: **A Critical Areas Ordinance that uses best available science and includes the following provisions: wetlands, areas with a critical recharging effect on aquifers for potable water, frequently flooded areas, geologically hazardous areas, and fish and wildlife habitat conservation areas.**

Location:

The City of Camas

Legal Description:

Portions of Township 2 North, Range 3 E, Sections 28, 32, 33, and 34 and Portions of Township 1 North, Range 3 E, Sections 2,3,4,5,8,9,10,11,12,13,14, 15, 16, and Portions of Township 1 North, Range 4E, Section 7. (Camas City Limits)

SEPA Determination:

Determination of Non-Significance

Comment Deadline:

May 30, 2003

As lead agency under the State Environmental Policy Act (SEPA) Rules [Chapter 197-11, Washington Administrative Code (WAC)], the City of Camas must determine if there are possible significant adverse environmental impacts associated with this proposal. The options include the following:

- **DS = Determination of Significance (The impacts cannot be mitigated through conditions of approval and, therefore, requiring the preparation of an Environmental Impact Statement (EIS).**
- **MDNS = Mitigated Determination of Non-Significance (The impacts can be addressed through conditions of approval), or;**
- **DNS = Determination of Non-Significance (The impacts can be addressed by applying the Camas Municipal Code).**

Determination:

Determination of Non-Significance (DNS). The City of Camas, as lead agency for review of this proposal, has determined that this proposal does not have a probable significant adverse impact on the environment. An Environmental Impact Statement (EIS) is not required under RCW 43.21C.030(2)(e). This decision was made after review of a completed environmental checklist and other information on file with the City.

Date of Publication & Comment Period:

Publication date of this DNS is May 16, 2003, and is issued under WAC 197-11-340. The lead agency will not act on this proposal until the close of the 14 day comment period which ends on May 30, 2003.

SEPA Appeal Process:

An appeal of any aspect of this decision, including the SEPA determination and any required mitigation, must be filed with the Public Works Department within fourteen (14) calendar days from the date of the decision notice. The letter of appeal should contain the following information.

1. **The case number designated by the City of Camas and the name of the applicant; and,**
2. **The name and signature of each person or group (petitioners) and a statement showing that each petitioner is entitled to file an appeal as described under Section 16.28.060 of the Camas Municipal Code. If multiple parties file a single petition for review, the petition shall designate one party as the contact representative with the City Planner. All contact with the City Planner regarding the petition, including notice, shall be with this contact person.**

The appeal request and is to be submitted to the Public Works Department between 8:00 a.m. and 5:00 p.m. Monday through Friday, at the address listed below:

Appeal to the City of Camas SEPA Official
Public Works Department
616 NE Fourth Avenue / P.O. Box 1055
Camas, Washington 98607

Staff Contact Person: Martin Snell (360) 834-3451

Responsible Official: Doug Quinn (360) 834-6864

Martin Snell, Planning Manager _____ **Date:** 5/16/03

Douglas A. Quinn, Responsible Official _____ **Date:** 5.16.03

ENVIRONMENTAL CHECKLIST

Purpose of Checklist:

The State Environmental Policy Act (SEPA), chapter 43.21C RCW, requires all governmental agencies to consider the environmental impacts of a proposal before making decisions. An environmental impact statement (EIS) must be prepared for all proposals with probable significant adverse impacts on the quality of the environment. The purpose of this checklist is to provide information to help you and the agency identify impacts from your proposal (and to reduce or avoid impacts from the proposal, if it can be done) and to help the agency decide whether an EIS is required.

Instructions for Applicants:

This environmental checklist asks you to describe some basic information about your proposal. Governmental agencies use this checklist to determine whether the environmental impacts of your proposal are significant, requiring preparation of an EIS. Answer the questions briefly, with the most precise information known, or give the best description you can.

You must answer each question accurately and carefully, to the best of your knowledge. In most cases, you should be able to answer the questions from your own observations or project plans without the need to hire experts. If you really do not know the answer, or if a question does not apply to your proposal, write "do not know" or "does not apply". Complete answers to the questions now may avoid unnecessary delays later.

Some questions ask about governmental regulations, such as zoning, shoreline, and landmark designations. Answer these questions if you can. If you have problems, the governmental agencies can assist you.

The checklist questions apply to all parts of your proposal, even if you plan to do them over a period of time or on different parcels of land. Attach any additional information that will help describe your proposal or its environmental effects. The agency to which you submit this checklist may ask you to explain your answers or provide additional information reasonably related to determining if there may be significant adverse impact.

Use of checklist for nonproject proposals:

Complete this checklist for nonproject proposals, even though questions may be answered "does not apply". IN ADDITION, complete the SUPPLEMENTAL SHEET FOR NONPROJECT ACTIONS (PART D).

For nonproject actions, the references in the checklist to the words "project", "applicant", and "property or site" should be read as "proposal", "proposer", and "affected geographic area", respectively.

A. BACKGROUND

1. Name of proposed project, if applicable:

Critical Areas Ordinance (CAO)

2. Name of applicant:

City of Camas

3. Address and telephone number of applicant and contact person:

Applicant	Contact Person
City of Camas 616 NE 4th Avenue P.O. Box 1055 Camas, WA 98607	Martin Snell, AICP Planning Manager City of Camas 616 NE 4th Avenue P.O. Box 1055 Camas, WA 98607 (360) 834-3451 ext. 4252

4. Date checklist prepared:

May 9, 2003

5. Agency requesting checklist:

City of Camas

6. Proposed timing or schedule (including phasing, if applicable):

The draft CAO will be reviewed in mid and late May 2003 by the Camas City Council, and then adopted soon after the Department of Community, Trade and Economic Development's 60-day review period. Final and formal adoption will likely occur in mid to late June of 2003. In the event not all chapters are adopted at once, the remaining chapters (not adopted this Summer) will be adopted prior to the deadline set out by statute, which is December 1, 2004.

7. Do you have any plans for future additions, expansion or further activity related to or connected with this proposal? If yes, explain.

No.

8. List any environmental information you know about that has been prepared, or will be prepared, directly related to this proposal.

None.

9. Do you know whether applications are pending for governmental approvals of other proposals directly affecting the property covered by your proposal? If yes, explain.

The Department of Community, Trade and Economic Development (DCTED) requires a 60-day review and comment period for changes to GMA related plans and implementation.

10. List any government approvals or permits that will be needed for your proposal, if known.

The proposed CAO is being reviewed at a planning level, as opposed to a project level. CTED will review and provide comment on the material prior to final adoption of the CAO by City Council.

11. Give a brief, complete description of your proposal, including the proposed uses and the size of the project and site. There are several questions later in this checklist that ask you to describe certain aspects of your proposal. You do not need to repeat those answers on this page. (Lead agencies may modify this form to include additional specific information on project description.)

Pursuant to the requirement under RCW 36.70.A.172 to use best available science (BAS), the draft CAO includes general and specific provisions related to the following:

- Wetlands,
- Areas with a critical recharging effect on aquifers for potable water (CARA's),
- Frequently flooded areas,
- Geologically hazardous areas, and
- Fish and wildlife habitat conservation areas.

In response to this mandatory charge, the City of Camas assembled a project team – composed of members from the City Council, Planning Commission, and engineering and planning staff – to oversee the creation of a draft ordinance. The City of Camas also contracted with the environmental science and engineering firm of Parametrix to assist in drafting an ordinance consistent with the statutory and administrative requirements as prescribed. Parametrix also conducted the BAS review needed for drafting the ordinance.

One intended outcome of the draft ordinance is to replace all current GMA related environmental regulations, now scattered in various titles to the Camas Municipal Code, with a set of regulations in one single title – Title 16 Environment. Accordingly, the draft ordinance contains a general provisions chapter (16.50) and a chapter for each of the five critical areas (16.60, 16.70, 18.80, 16.90, and 16.95). To aid in developing the draft provisions, the project team relied upon current code, germane public input, and a state model code. The model code proved valuable for the general provisions, reporting requirements, and some of the performance standards that are contained in the draft ordinance.

As a means of soliciting meaningful input, early on the City of Camas engaged a public process that included open houses (February 6 and December 12, 2002), stakeholders meetings (December 17 and 19, 2001), Planning Commission/City Council joint work sessions, and other mediums of communication (e.g. City Tent at Camas Days). City staff has also e-mailed either the draft document or the availability of the document to a mailing list created throughout the process. The enclosed memo dated March 11, 2002, is just one piece that documents the public involvement process.

12. Location of the proposal. Give sufficient information for a person to understand the precise location of your proposed project, including a street address, if any, and section, township, and range, if known. If a proposal would occur over a range of area, provide the range or boundaries of the site(s). Provide a legal description, site plan, vicinity map and topographic map, if reasonably available. While you should submit any plans required by the agency, you are not required to duplicate maps or detailed plans submitted with any permit applications related to this checklist.

The planning area is bounded by the corporate limits of the City of Camas. (See map.)

TO BE COMPLETED BY APPLICANT | **EVALUATION FOR AGENCY USE ONLY**

B. ENVIRONMENTAL ELEMENTS

1. Earth

a. General description of the site (underline one): Flat, rolling, hilly, steep slopes, mountainous, other Topography in the area ranges from flat in the older core of Camas and on the west side of Prune Hill to hilly on the flanks of Prune Hill to steep slopes in some areas of Prune Hill and in some canyons on the south side of Prune Hill.

b. What is the steepest slope on the site (approximate percent slope)?
The steepest slope in the area is well over 40%, in the southern area of Prune Hill overlooking the Columbia River.

c. What general types of soils are found on the site (for example, clay, sand, gravel, peat, muck)? If you know the classification of agricultural soils, specify them and note any prime farmland.

The US Soil Conservation Service survey of Clark County shows a number of soil series in the Camas area. A map of the soil series is enclosed for review and will, in part, be adopted by reference for identifying and protecting geologically hazardous areas.

d. Are there surface indications or history of unstable soils in the immediate vicinity? If so, describe.

The map referenced above indicates the presence of certain soil series may include unstable soils.

e. Describe the purpose, type, and approximate quantities of any filling or grading proposed. Indicate source of fill.

The adoption of the draft CAO would not directly result in filling or grading. Grading and filling in connection with future development in the area would require SEPA review at that time.

f. Could erosion occur as a result of clearing, construction, or use? If so, generally describe.

While some of the mapped soils have a higher risk of erosion when not covered with vegetation, the adoption of the draft CAO would not directly result in clearing, construction or use.

g. About what percent of the site will be covered with impervious surfaces after project construction (for example, asphalt or buildings)?

The adoption of the draft CAO would not directly result in coverage of impervious surfaces.

h. Proposed measures to reduce or control erosion, or other impacts to the earth, if any:

The draft CAO includes a number of provisions to reduce or control erosion. Under the draft CARA chapter, there are provisions that relate to limiting the amount of pervious surfaces accompanied by development.

2. Air

a. What types of emissions to the air would result from the proposal (i.e., dust, automobile, odors, and industrial wood smoke) during construction and when the project is completed? If any, generally describe and give approximate quantities, if known.

The adoption of the draft CAO would not directly result in emissions to the air.

b. Are there any off-site sources of emissions or odor that may affect your proposal? If so, generally describe.

Not applicable.

c. Proposed measures to reduce or control emissions or other impacts to air, if any:

Not applicable.

3. Water

a. Surface:

1) Is there any surface water body on or in the immediate vicinity of the site (including year-round and seasonal streams, saltwater, lakes, ponds, wetlands)? If yes, describe type and provide names. If appropriate, state what stream or river it flows into.

There are six main surface water bodies in the area: Lacamas Lake, Round Lake, Fallen Leaf Lake, Lacamas Creek, the Washougal River, and the Columbia River. There are also several named and unnamed year-round and seasonal streams in the city.

2) Will the project require any work over, in, or adjacent to (within 200 feet) the described waters? If yes, please describe and attach available plans.

Not applicable.

3) Estimate the amount of fill and dredge material that would be placed in or removed from surface water or wetland, and indicate the area of the site that would be affected. Indicate the source of fill material.

The adoption of the draft CAO would not directly result in filling or grading. Grading and filling in connection with future development in the area would require SEPA review at that time.

4) Will the proposal require surface water withdrawals or diversions? Give general description, purpose and approximate quantities, if known.

Not applicable.

5) Does the proposal lie within a 100-year floodplain? If so, note location on the site plan.

There are areas within the City of Camas that lie within the 100-year floodplains of the Columbia River, the Washougal River or Lacamas Creek.

6) Does the proposal involve any discharges of waste materials to surface waters? If so, describe the type of waste and anticipated volume of discharge.

Not applicable.

b. Ground:

1) Will ground water be withdrawn, or will water be discharged to ground water? Give general description, purpose and approximate quantities, if known.

The adoption of the draft CAO would not directly result in ground water withdrawals or discharges. Ground water withdrawals or discharges in connection with future development in the area would require SEPA review at that time.

2) Describe waste material that will be discharged into the ground from septic tanks or other sources, if any (for example: domestic sewage; industrial; containing the following chemicals...; agricultural; etc.). Describe the general size of the system, the number of such systems, the number of houses to be served (if applicable), or the number of animals or humans the system(s) is expected to serve.

Not applicable.

c. Water Runoff (including storm water):

1) Describe the source of runoff (including storm water) and method of collection and disposal, if any (include quantities, if known). Where will this water flow? Will this water flow into other waters? If so, describe.

The adoption of the draft CAO would not directly result in water runoff.. Water runoff including storm water in connection with future development in the area would require SEPA review at that time.

2) Could waste materials enter ground or surface waters? If so, generally describe.

Adoption of the draft CAO would not result in accidental or intentional discharge of waste materials. No waste materials would enter ground or surface waters under routine conditions. However, surface and ground waters, if not protected by sufficient setbacks or buffers, could receive waste materials from accidental spills of fuel or other materials from urban scale development. The type of materials would depend on the type of development.

d. Proposed measures to reduce or control surface, ground and runoff water impacts, if any:

The draft CAO includes a number of provisions to reduce or control surface, ground and runoff water. Under the draft CARA chapter, there are provisions that relate to limiting the amount of pervious surfaces accompanied by development.

4. Plants

a. Check or underline types of vegetation found on the site:

X deciduous tree: alder, maple, aspen, other
X evergreen tree: fir, cedar, pine, other
X shrubs
X grass
X pasture
X crop or grain
X wet soil plants: cattail, buttercup, bullrush, skunk cabbage, other
X other types of vegetation

b. What kind and amount of vegetation will be removed or altered?

Adoption of the draft CAO would not result in vegetation removal or alteration. Any project that results in the removal or alteration of vegetation would require SEPA review at that time.

c. List threatened or endangered species known to be on or near the site.

An endangered plant species, *lomatium Bradshawii*, was found in a wetland area on the north portion of a site known as Camas Meadows (northern portion of North Dwyer Creek subarea). The developer of Camas Meadows worked with the US Fish and Wildlife Service to protect the habitat and limit development activities in the area of the population of Bradshaw's lomatium. No evidence of this plant was found on other areas of the North Dwyer Creek subarea.

d. Proposed landscaping, use of native plants, or other measures to preserve or enhance vegetation on the site, if any:

5. Animals

a. Underline any birds and animals which have been observed on or near the site or are known to be on or near the site:

birds: hawk, heron, eagle, songbirds, other: osprey, waterfowl
mammals: deer, bear, elk, beaver, other: raccoon, possum
fish: bass, salmon, trout, herring, shellfish, other: _____

b. List any threatened or endangered species known to be on or near the site.

Five salmonid species – Fall Chinook, Chum and Coho salmon, Summer and Winter steelhead, and Bull trout – are present with Lacamas Creek, the Washougal River and the Columbia River within the community. Bald eagles have been known to be along the Lacamas Lake/Lacamas Creek corridor and the Columbia River.

c. Is the site part of a migration route? If so, explain.

The area site is within the Pacific Flyway, which is used by migratory waterfowl species.

d. Proposed measures to preserve or enhance wildlife, if any:

The draft ordinance provides for the protection of wildlife. Specifically for endangered, threatened and sensitive species and anadromous fish, the draft fish and wildlife habitat conservation areas provide a great deal of preservation measures. The draft language calls for the use of riparian habitat areas for the protection and enhancement of the habitat for species that are present within these habitats.

6. Energy and Natural Resources

a. What kinds of energy (electric, natural gas, oil, wood stove, solar) will be used to meet the completed project's energy needs? Describe whether it will be used for heating, manufacturing, etc.

Adoption of the draft CAO would not affect existing policies or regulations concerning energy use. Development density and intensity would not be greater than that envisioned in the *1994 Comprehensive Plan*, which considered future development of a larger Urban Growth Area than was subsequently approved. No impacts are anticipated. Future residential and industrial development can be expected to use electricity and natural gas (and possibly wood stoves in residences) as sources of heat and light.

b. Would your project affect the potential use of solar energy by adjacent properties? If so, generally describe.

Not applicable.

c. What kinds of energy conservation features are included in the plans of this proposal? List other proposed measures to reduce or control energy impacts, if any.

No energy conservation features are included in the draft CAO.

7. Environmental Health

a. Are there any environmental health hazards, including exposure to toxic chemicals, risk of fire and explosion, spill or hazardous waste, that could occur as a result of this proposal? If so, describe.

Not applicable.

1) Describe special emergency services that might be required.

Not applicable.

2) Proposed measures to reduce or control environmental health hazards, if any:

There are provisions under the critical aquifer recharge areas chapter that reduce or control environmental health hazards. These include conditions when permitting certain land uses or prohibitions of certain land uses to protect municipal potable water supplies.

b. Noise

1) What types of noise exist in the area which may affect your project (for example: traffic, equipment, operation, other)?

Not applicable.

2) What types and levels of noise would be created by or associated with the project on a short-term or a long-term basis (for example: traffic, construction, operation, other)? Indicate what hours noise would come from the site.

Not applicable.

3) Proposed measures to reduce or control noise impacts, if any:

None.

8. Land and Shoreline Use

a. What is the current use of the site and adjacent properties?

Camas is an urbanized and urbanizing community that has a variety of land uses from a large historic pulp and paper manufacturer to a modern semi-conductor plant and from older residential neighborhoods to new subdivisions. Commercial development centers in the downtown core near the pulp and paper mill and in outlying corridors. Camas also has an abundance of undeveloped property, natural open space, parks, and other public grounds.

b. Has the site been used for agriculture? If so, describe.

Portions of the community (in Grass Valley) were in agricultural use in the past, and some southern portions appear to still be used for hay production or pasture.

c. Describe any structures on the site.

There a several thousand structures in the city, including over 4,800 dwelling units.

d. Will any structures be demolished? If so, what?

No.

e. What is the current zoning classification of the site?

The City of Camas has adopted the following zoning districts throughout the community:

District	Symbol	Comprehensive Plan Designation
Residential -20,000	R-20	Single Family Low
Residential -15,000	R-15	Single Family Low
Residential -12,000	R-12	Single Family Medium
Residential -10,000	R-10	Single Family Medium
Residential -7,500	R-7.5	Single Family High
Residential -6,000	R-6	Single Family High
Multifamily Low	LMF	Multifamily-Low
Multifamily Medium	MMF	Multifamily - Medium
Multifamily High	HMF	Multifamily - High
Neighborhood Commercial	NC	Commercial
Community Commercial	CC	Commercial
Regional Commercial	RC	Commercial
Downtown Commercial	DC	Commercial
Light Industrial	LI	Light Industrial
Light Industrial/ Business Park	LI/BP	Light Industrial/Country Tech
Heavy Industrial	HI	Heavy Industrial

f. What is the current comprehensive plan designation of the site?

Please see table above.

g. If applicable, what is the current shoreline master program designation of the site?

The City of Camas has adopted the following shorelines designations for areas subject to shorelines jurisdiction:

Designation
Urban High
Urban Medium/Low
Conservancy
Natural
Aquatic

h. Has any part of the site been classified as an "environmentally sensitive" area? If so, specify.

The current Sensitive Areas ordinance classifies, at a minimum, steep slopes and areas of unstable soils, wetlands, stream and watercourses as environmentally sensitive. Floodplains are not specifically listed in this chapter of the municipal code but are regulated under a different chapter and are treated similarly.

i. Approximately how many people would reside or work in the completed project?

The City of Camas has a current population of about 14,200 with a forecasted population of about 21,000 in a twenty-year planning horizon.

j. Approximately how many people would the completed project displace?

Not applicable.

k. Proposed measures to avoid or reduce displacement impacts, if any:

Not applicable.

l. Proposed measures to ensure the proposal is compatible with existing and projected land uses and plans, if any:

The draft CAO attempts to strike a balance between providing for the protection of critical areas and allowing development to occur to accommodate a twenty-year population forecast.

9. Housing

a. Approximately how many units would be provided, if any? Indicate whether high, middle or low-income housing.

Not applicable.

b. Approximately how many units, if any, would be eliminated? Indicate whether high, middle, or low-income housing.

Not applicable.

c. Proposed measures to reduce or control housing impacts, if any:

There are provisions within the draft CAO that reduce or control housing impacts on properties containing critical areas. With certain critical areas (e.g. wetlands, floodplains), the draft provisions do not allow new lots within the identified critical area or its buffer/management zone.

10. Aesthetics

a. What is the tallest height of any proposed structure(s), not including antennas; what is the principal exterior building material(s) proposed?

Not applicable.

b. What views in the immediate vicinity would be altered or obstructed?

Not applicable.

c. Proposed measures to reduce or control aesthetic impacts, if any:

Not applicable.

11. Light and Glare

a. What type of light or glare will the proposal produce? What time of day would it mainly occur?

Not applicable.

b. Could light or glare from the finished project be a safety hazard or interfere with views?

Not applicable.

c. What existing off-site sources of light or glare may affect your proposal?

Not applicable.

d. Proposed measures to reduce or control light and glare impacts, if any:

Not applicable.

12. Recreation

a. What designated and informal recreational opportunities are in the immediate vicinity?

There are numerous active and passive recreational opportunities within the City of Camas and the immediate vicinity. Active recreational opportunities exist in the twelve developed parks and on the major waterways within city limits. Passive recreational opportunities exist within the approximately 436 acres of open space areas within the city. A 312-acre regional park (Lacamas Lake County Park) provides both active and passive recreation. Numerous paved and unpaved trails within residential developments, parks, and open space areas also provide both active and passive recreational opportunities.

b. Would the proposed project displace any existing recreational uses? If so, describe.

No.

c. Proposed measures to reduce or control impacts on recreation, including recreation opportunities to be provided by the project or applicant, if any:

Not applicable.

13. Historic and Cultural Preservation

a. Are there any places or objects listed on, or proposed for, national, state or local preservation registers known to be on or next to the site? If so, generally describe.

Not applicable.

b. Generally describe any landmarks or evidence of historic, archaeological, scientific or cultural importance known to be on or next to the site.

Not applicable.

c. Proposed measures to reduce or control impacts, if any:

Not applicable..

14. Transportation

a. Identify public streets and highways serving the site, and describe proposed access to the existing street system. Show on site plans, if any.

The basic roadway system providing circulation to and from Camas is the federal and state highway system – Interstate 5, Interstate 205, State Route-14, and State Route-500. The interstates link Camas and surrounding areas to Portland to the south, as well as Olympia and Seattle to the north. State Route-14 is the major east-west connection from Camas to I-205 and I-5. State Route-500 provides access to the northern parts of the County.

There are some major arterials – Pacific Rim Boulevard, SE 1st/Lake Road, Brady/Parker Road, NE 3rd Avenue to name a few – and several minor arterials that provide circulation between Camas and communities to the west and east. These arterials also provide a significant amount of circulation within the community.

b. Is site currently served by public transit? If not, what is the approximate distance to the nearest transit stop?

C-TRAN provides limited public transit service to Camas for connection to other communities within Clark County. The nearest park and ride (Fisher's Landing Transit Center), which is a major connector for east Vancouver, is located within 2 miles of the western city limits of Camas.

c. How many parking spaces would the completed project have? How many would the project eliminate?

Not applicable.

d. Will the proposal require any new roads or streets, or improvements to existing roads or streets, not including driveways? If so, generally describe (indicate whether public or private).

Not applicable.

e. Will the project use (or occur in the immediate vicinity of) water, rail or air transportation? If so, generally describe.

Not applicable.

f. How many vehicular trips per day would be generated by the completed project? If known, indicate when peak volumes would occur.

Not applicable.

g. Proposed measures to reduce or control transportation impacts, if any:

There are provisions within the draft CAO that reduce or control transportation impacts on properties containing critical areas. With certain critical areas (e.g. wetlands, floodplains), the draft provisions strongly discourage transportation improvements within the identified critical area or its buffer/management zone.

15. Public Services

a. Would the project result in an increased need for public services (for example: fire protection, police protection, health care, schools, other)? If so, generally describe.

Not applicable.

b. Proposed measures to reduce or control direct impacts on public services, if any:

Not applicable.

16. Utilities

a. Underline utilities currently available at the site: electricity, natural gas, water, refuse service, telephone, sanitary sewer, septic system, other.

The City of Camas is the service provider for water, refuse, and sanitary sewer for the community. The other utility providers are as follow:

Electricity	Natural Gas	Telephone
Clark Public Utilities	Northwest Natural	Verizon

b. Describe the utilities that are proposed for the project, the utility providing the service, and the general construction activities on the site or in the immediate vicinity which might be needed.

Not applicable.

C. SIGNATURE

The above answers are true and complete to the best of my knowledge. I understand that the lead agency is relying on them to make its decision.

Signature: _____

Date Submitted: 5/9/03

D. SUPPLEMENTAL SHEET FOR NONPROJECT ACTIONS

(do not use this sheet for project actions)

Because these questions are very general, it may be helpful to read them in conjunction with the list of the elements of the environment.

When answering these questions, be aware of the extent the proposal, or the types of activities likely to result from the proposal, would affect the item at a greater intensity or at a faster rate than if the proposal were not implemented. Respond briefly and in general terms.

1. How would the proposal be likely to increase discharge to water; emissions to air; production, storage or release of toxic or hazardous substances; or production of noise?

The proposed Critical Areas Ordinance (CAO) would not change the types of potential discharges or emissions that could occur because the type of future development would not be different than what is currently allowed by the City's Comprehensive Plan and Zoning Code.

Proposed measures to avoid or reduce such increases are:

The provisions in the draft CAO are intended to protect the functions and values of the critical areas thereby diminishing the likelihood of discharges or emissions to the environment. In addition, the draft CAO includes general and specific performance standards that provide measures to avoid or reduce such increases.

2. How would the proposal be likely to affect plants, animals, fish or marine life?

The proposed Critical Areas Ordinance (CAO) would generally provide greater protection to plants, animals, and fish than what is currently provided. The proposal better identifies critical areas especially as relates to habitat and provides for buffers or management zones for protecting the function of the critical areas. The City of Camas has taken special consideration with respect to anadromous fisheries and has drafted special provisions for the protection of anadromous fisheries habitat.

Proposed measures to protect or conserve plants, animals, fish or marine life are:

The draft CAO contains provisions to protect the natural environment. The draft ordinance includes measures to prohibit, limit, and/or condition certain uses and activities in order to protect plants, animals, or fish.

3. How would the proposal be likely to deplete energy or natural resources?

The proposed CAO does not specifically address energy resources or the impacts of future development to energy resources. The proposal then would not likely affect energy or natural resource usage. However the proposal using best available science (BAS) would likely provide greater protection or conservation of natural resources than current regulations provide.

Proposed measures to protect or conserve energy and natural resources are:

Measures to protect or conserve energy and natural resources include use and activity prohibitions, limitations, and/or conditions. Many of the draft chapters include mitigation sequencing provisions such that avoidance of impacts to the natural environment is encouraged first and foremost.

4. How would the proposal be likely to use or affect environmentally sensitive areas or areas designated (or eligible or under study) for governmental protection; such as parks, wilderness, wild and scenic rivers, threatened or endangered species habitat, historic or cultural sites, wetlands, floodplains or prime farmlands?

The entire focus of the draft CAO is to provide a largely scientific framework to identify and protect environmentally sensitive area including habitat, wetlands and floodplains. When adopted, it is very likely then that the provisions will affect, and positively so, the protection of these areas.

Proposed measures to protect such resources or to avoid or reduce impacts are:

As required by statute, the draft language uses BAS to identify and protect such resources from impacts of urban and suburban scale development. In addition, the draft CAO includes general and specific performance standards that provide measures to avoid or reduce such impacts.

5. How would the proposal be likely to affect land and shoreline use, including whether it would allow or encourage land or shoreline uses incompatible with existing plans?

The proposed CAO would generally provide better protection of incompatible uses to shoreline and land resources than what is currently provided. The proposal better identifies critical areas with regard to development activity and provides for clear performance standards to avoid adverse impacts to these finite resources of the city.

Proposed measures to avoid or reduce shoreline and land use impacts are:

The draft CAO contains provisions to avoid or reduce the impacts to shoreline and land resources. The draft ordinance includes measures to prohibit, limit, and/or condition certain uses and activities in order to protect these resources.

6. How would the proposal be likely to increase demands on transportation or public services and utilities?

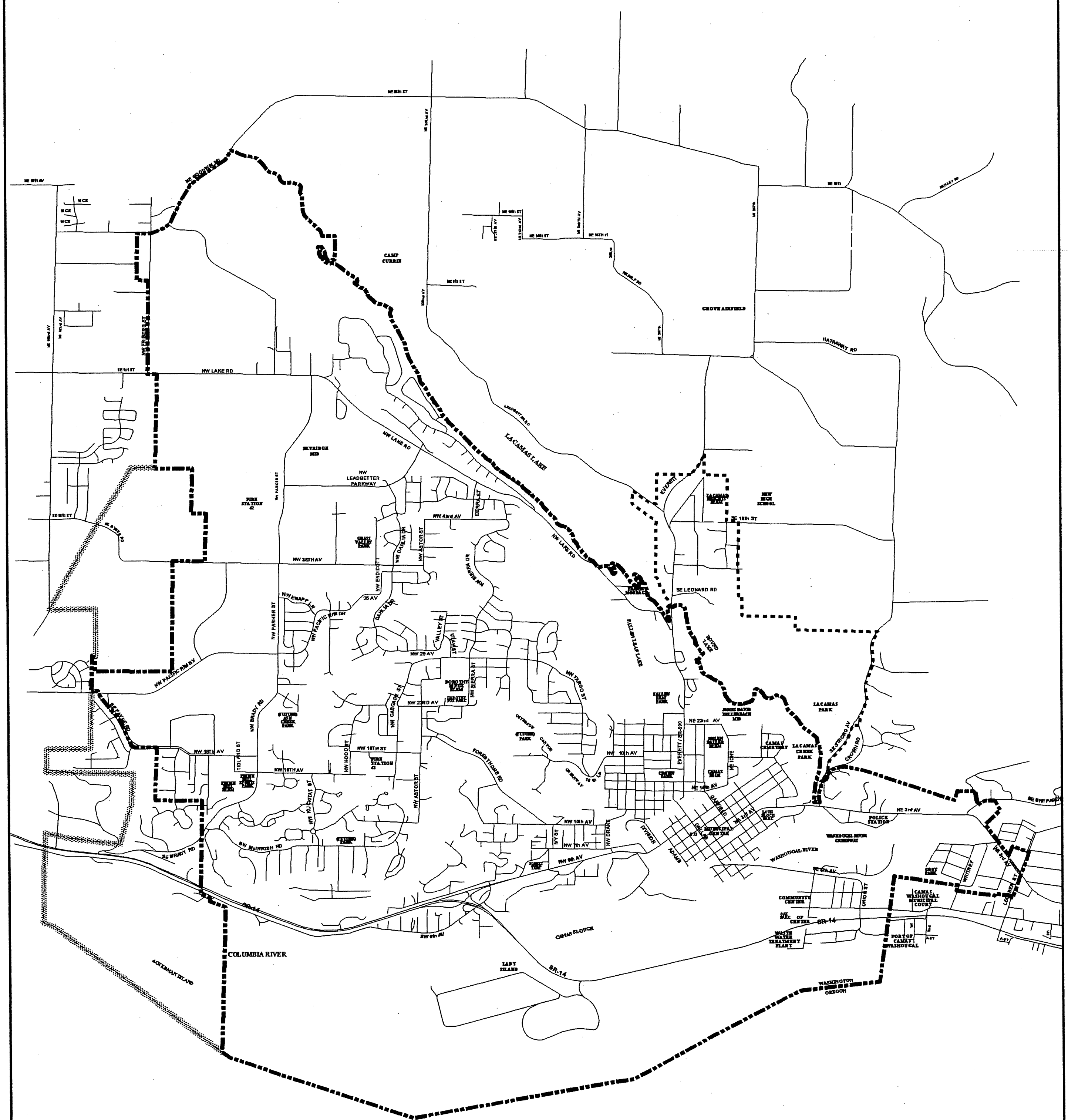
Not applicable.

Proposed measures to reduce or respond to such demand(s) are:

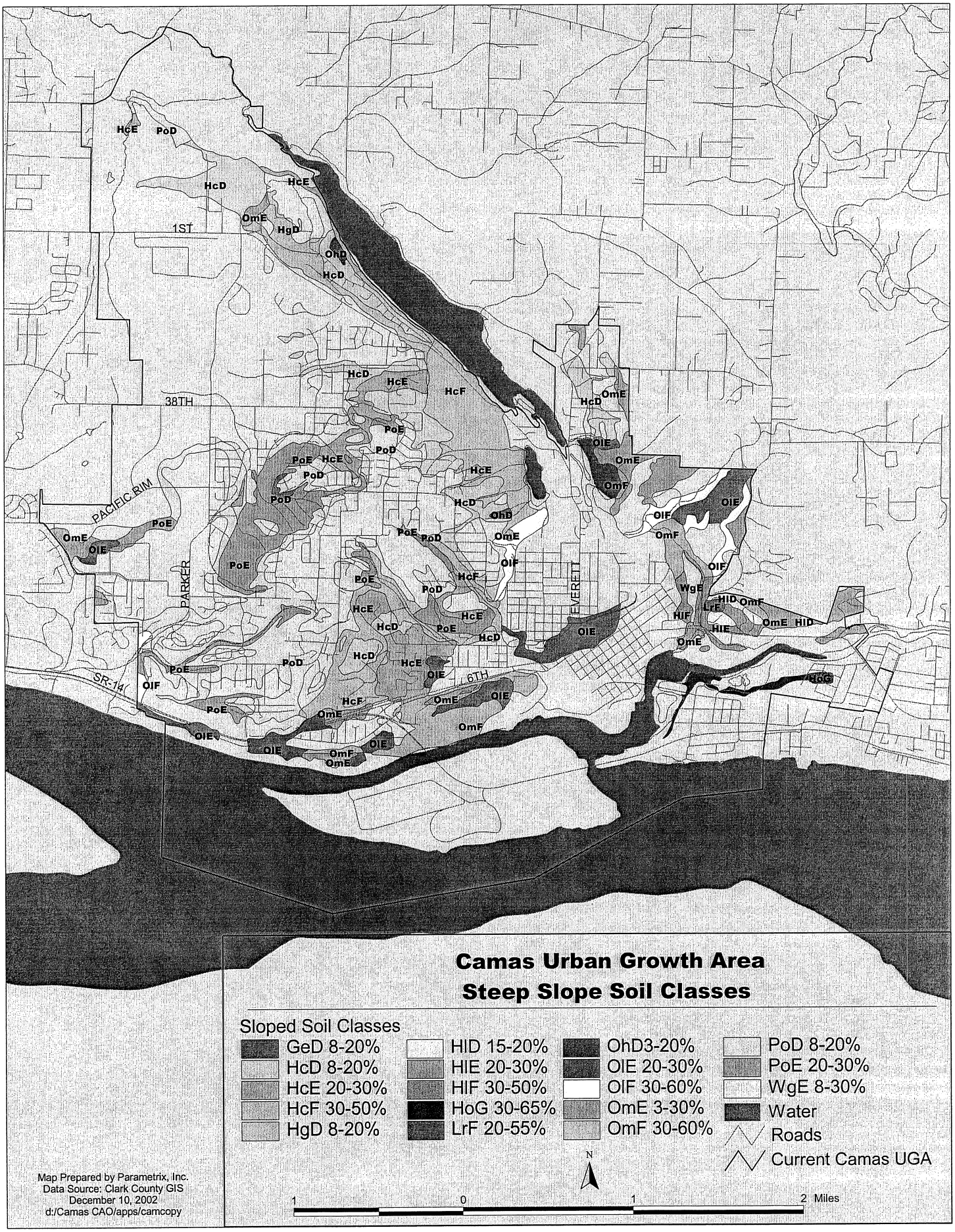
Not applicable.

7. Identify, if possible, whether the proposal may conflict with local, state or federal laws or requirements for the protection of the environment.

As required by state law, the proposed CAO uses best available science and is consistent with the statute's intent and specific provisions to protect the environment.



CITY OF CAMAS



Camas Urban Growth Area
Steep Slope Soil Classes

Sloped Soil Classes

- GeD 8-20%
- HcD 8-20%
- HcE 20-30%
- HcF 30-50%
- HgD 8-20%
- HlD 15-20%
- HlE 20-30%
- HlF 30-50%
- HoG 30-65%
- LrF 20-55%
- OhD3-20%
- OlE 20-30%
- OlF 30-60%
- OmE 3-30%
- OmF 30-60%
- PoD 8-20%
- PoE 20-30%
- WgE 8-30%
- Water
- Roads
- Current Camas UGA

N

1 0 1 2 Miles

Map Prepared by Parametrix, Inc.
Data Source: Clark County GIS
December 10, 2002
d:/Camas CAO/apps/camcopy

Title 16 Critical Areas

Chapters:

Chapter 16.50 General Provisions

Sections:

16.50.010 Purpose

A. The purpose of this chapter is to designate and classify ecologically sensitive and hazardous areas and to protect these areas and their functions and values, while allowing for some reasonable use of property.

B. The City of Camas finds that critical areas provide a variety of valuable and beneficial biological and physical functions that benefit the City of Camas and its residents, and/or may pose a threat to human safety or to public and private property.

C. Goals. By managing development and alteration of critical areas, this chapter seeks to:

1. Protect members of the public and public resources and facilities from injury, loss of life, or property damage due to landslides and steep slope failures, erosion, seismic events, or flooding;

2. Protect unique, fragile, and valuable elements of the environment, including ground and surface waters;

3. Direct activities not dependent on critical area resources to less ecologically sensitive sites and mitigate necessary impacts to critical areas by regulating alterations in and adjacent to critical areas; and

4. Prevent cumulative adverse environmental impacts to critical aquifer recharge and frequently flooded areas.

D. The regulations of this chapter are intended to protect critical areas in accordance with the Growth Management Act and through the application of best available science, as determined according to WAC 365-195-900 through 365-195-925, and in consultation with state and federal agencies and other qualified professionals.

E. This chapter is to be administered with flexibility and attention to site-specific characteristics. It is not the intent of this chapter to make a parcel of property unusable by denying its owner reasonable economic use of the property.

F. The City of Camas's enactment or enforcement of this chapter shall not be construed for the benefit of any individual person or group of persons other than the general public.

16.50.020 Authority

As provided herein, the director shall mean the Public Works Director or designee. The director is given the authority to interpret and apply, and the responsibility to enforce this chapter to accomplish the stated purpose.

16.50.030 Relationship to other regulations

A. These critical area regulations shall apply as an overlay and in addition to zoning and other regulations, including the *City of Camas Design Standards Manual*, adopted by the City of Camas.

B. These critical area regulations may be applied concurrently with review conducted under the State Environmental Policy Act (SEPA) or other development review, as adopted.

C. In the event of a conflict with any other provisions of this chapter, that which provides more protection to the critical areas shall apply.

D. Compliance with the provisions of this chapter does not constitute compliance with other federal, state, and local regulations and permit requirements that may be required (for example, Shoreline Substantial Development Permits, HPA permits, Army Corps of Engineers Section 404 permits, NPDES permits). The applicant is responsible for complying with all requirements, apart from the process established in this chapter.

16.50.040 Severability.

If any clause, sentence, paragraph, section, or part of this chapter or the application thereof to any person or circumstances shall be judged by any court of competent jurisdiction to be invalid, such order or judgment shall be confined in its operation to the controversy in which it was rendered. The decision shall not affect or invalidate the remainder of any part thereof and to this end the provisions of each clause, sentence, paragraph, section, or part of this law are hereby declared to be severable.

16.50.050 Administrative rules.

Applicable departments within the City of Camas are authorized to adopt such administrative rules and regulations as necessary and appropriate to implement these chapters and to prepare and require the use of such forms as necessary for its administration.

The applicant shall be responsible for the initiation, preparation, submission, and expense of all required reports, assessment(s), studies, plans, reconnaissance(s), peer review(s) by qualified consultants, and other work prepared in support of or necessary to review the application.

16.50.060 Interpretation.

In the interpretation and application of this ordinance, the provisions of this chapter shall be considered to be the minimum requirements necessary, shall be liberally construed to serve the purpose of this ordinance, and shall be deemed to neither limit nor repeal any other provisions under state statute.

16.50.070 Critical areas – regulated

A. Critical areas regulated by this chapter include critical aquifer recharge areas [Chapter 16.70], frequently flooded areas [Chapter 16.80], and geologically hazardous areas [Chapter 16.90].

B. All areas within the City of Camas meeting the definition of one or more critical area, regardless of any formal identification, are hereby designated critical areas and are subject to these provisions.

16.50.080 Best available science

A. Best available science to be used must be consistent with criteria. The best available science is that scientific information applicable to the critical area prepared by local, state or federal natural resource agencies, a qualified scientific professional or team of qualified scientific professionals, that is consistent with criteria established in WAC 365-195-900 through WAC 365-195-925.

B. Absence of valid scientific information. Where there is an absence of valid scientific information or incomplete scientific information relating to a critical area, leading to uncertainty about the risk to critical area function of permitting an alteration of or impact to the critical area, the director shall:

1. Limit development and land use activities until the uncertainty is sufficiently resolved; and

2. Require an effective adaptive management program that relies on scientific methods to evaluate how well regulatory and non-regulatory actions protect the critical area. An adaptive management program is a formal and deliberate scientific approach to taking action and obtaining information in the face of uncertainty. An adaptive management program shall:

   a. Address funding for the research component of the adaptive management program;

   b. Change course based on the results and interpretation of new information that resolves uncertainties; and

   c. Commit to the appropriate timeframe and scale necessary to reliably evaluate regulatory and non-regulatory actions affecting protection of critical areas and anadromous fisheries.

16.50.090 Applicability

Land proposals below are subject to the criteria, guidelines, report requirements, conditions, and performance standards in Chapter 16.50 through 16.95:

A. Binding Site Plan;

B. Blasting Permits;

C. Commercial Development;

D. Conditional Use Permit;

E. Light Industrial or industrial development;

F. Planned Residential Development;

G. Short Plat;

H. Subdivision;

I. Shoreline substantial development permit;

J. Unclassified Use;

K. Any grading, filling or clearing of land or logging or removal of timber on land characterized in a critical area described in CMC 16.50.070(C);

L. Other activities as specified within Chapter 16.50 through 16.95.

16.50.100 Exemptions

A. Exempt activities. The following developments, activities, and associated uses shall be exempt from the provisions of this Title, provided that they are otherwise consistent with the provisions of other local, state, and federal laws and requirements:

1. Emergencies. Emergency activities are those activities necessary to prevent an immediate threat to public health, safety, or welfare, or that pose an immediate risk of damage to private property and that require remedial or preventative action in a timeframe too short to allow for compliance with the requirements of these provisions.

   An emergency response shall utilize reasonable methods to address the emergency considering the applicable critical area(s); in addition, they must have the least possible impact to the critical area or its management zone. The person or agency undertaking such action shall notify the City of Camas within four (4) days following commencement of the emergency activity. If the director determines that the action taken, or any part of the action taken, was beyond the scope of an allowed emergency action, then enforcement will commence.

   After the emergency, the person or agency undertaking the action shall fully restore and/or mitigate any impacts to the critical area and management zones resulting from the emergency action in accordance with an approved critical area report and mitigation

plan. Restoration and/or mitigation activities must be initiated within one (1) year of the date of the emergency, and completed in a timely manner;

2. Operation, maintenance or repair. Operation, maintenance or repair of existing structures, infrastructure improvements, utilities, public or private roads, dikes, levees or drainage systems, that do not further alter or increase the impact to, or encroach further within, the critical area or management;

3. Passive outdoor activities. Recreation, education, and scientific research activities that do not degrade the critical area, including fishing, hiking, and bird watching. Trails must be constructed pursuant to Section 16.50.130(C)(4); and

4. Forest practices. Forest practices regulated and conducted in accordance with the provisions of Chapter 76.09 RCW and forest practices regulations, Title 222 WAC, and those that are exempt from City of Camas's jurisdiction, provided that forest practice conversions are not exempt.

B. Exempt activities shall avoid impacts to critical areas. All exempted activities shall use reasonable methods to avoid potential impacts to critical areas. To be exempt from these provisions does not give permission to degrade a critical area or ignore risk from natural hazards. Any incidental damage to, or alteration of, a critical area that is not a necessary outcome of the exempted activity shall be restored, rehabilitated, or replaced at the responsible party's expense.

16.50.110 Exception - Reasonable use

A. If the application of this Title would deny all reasonable use of the subject property, the property owner may apply for an exception pursuant to this Section.

B. Exception request and review process. An application for a reasonable use exception shall be made to the City of Camas and shall include a critical area application and fee; critical area report, including mitigation plan, if necessary; and any other related project documents, such as permit applications to other agencies, special studies, and environmental documents prepared pursuant to the State Environmental Policy Act (Chapter 43.21C RCW) (SEPA documents). The director shall prepare a recommendation to the Planning Commission based on review of the submitted information, a site inspection, and the proposal's ability to comply with reasonable use exception criteria in Subsection (D).

C. Planning Commission review. The Planning Commission shall review the application and conduct a public hearing pursuant to the provisions Chapter 18.55.

D. Reasonable use review criteria. The criteria for review and approval of reasonable use exceptions is:

1. The application of these provisions would deny all reasonable use of the property; and any one of the following:

2. No other reasonable use of the property has less impact on the critical area; or

3. Any alteration is the minimum necessary to allow for reasonable use of the property; or

4. The inability of the applicant to derive reasonable use of the property is not the result of actions by the applicant after the effective date of these provisions, or its predecessor.

E. Burden of proof. The burden of proof shall be on the applicant to bring forth evidence in support of the application and to provide sufficient information on which any decision has to be made on the application.

16.50.120 Allowed activities

A. Critical area report not required. Activities which have been reviewed and permitted or approved by the City of Camas or other agency with jurisdiction for impacts to critical or sensitive areas, do not require submittal of a new critical area report or application under this chapter, unless such submittal was required previously for the underlying permit.

B. Required use of best management practices. All allowed activities shall be conducted using the best management practices, adopted pursuant other provisions contained in the Camas Municipal Code, that result in the least amount of impact to the critical areas. Best management practices shall be used for tree and vegetation protection, construction management, erosion and sedimentation control, water quality protection, and regulation of chemical applications. The City of Camas shall monitor the use of best management practices to ensure that the activity does not result in degradation to the critical area. Any incidental damage to, or alteration of, a critical area shall be restored, rehabilitated, or replaced at the responsible party's expense.

C. Allowed activities. The following activities are allowed:

1. Permit requests subsequent to previous critical area review. Development permits and approvals that involve both discretionary land use approvals (such as subdivisions, rezones, or conditional use permits), and construction approvals (such as building permits) if all of the following conditions have been met:

   a. There have been no material changes in the potential impact to the critical area or management zone since the prior review;

   b. There is no new information available that is applicable to any critical area review of the site or particular critical area;

   c. The permit or approval has not expired or, if no expiration date, no more than five years has elapsed since the issuance of that permit or approval; and

   d. Compliance with any standards or conditions placed upon the prior permit or approval has been achieved or secured;

2. Modification to existing structures. Structural modifications, addition to, or replacement of an existing legally constructed structure that does not further alter or increase the impact to the critical area or management zone and there is no increased risk to life or property as a result of the proposed modification or replacement, provided that restoration of structures substantially damaged by fire, flood, or act of nature must be initiated within one (1) year of the date of such damage, as evidenced by the issuance of a valid building permit, and diligently pursued to completion;

3. Activities within the improved right-of-way. Replacement, installation, or construction of utility facilities, lines, pipes, mains, equipment, or appurtenances, not including substations, when such facilities are located within the improved portion of the public right-of-way or a City of Camas authorized private roadway except those activities that alter a wetland or watercourse, such as culverts or bridges, or results in the transport of sediment or increased stormwater;

4. Public and private pedestrian trails.

    a. Existing public and private trails established consistent with the City of Camas *Parks and Open Space Plan* may be maintained, replaced or extended provided there is no increase in the impact to the critical area or management zone.

    b. Other public and private pedestrian trails, except in wetlands, fish and wildlife habitat conservation areas, or their management zones, subject to the following:

        i. The trail surface shall meet all other requirements including water quality standards set forth in the *City of Camas Design Standards Manual*;

        ii. Critical area and/or management zone widths shall be increased, where possible, equal to the width of the trail corridor, including disturbed areas; and

        iii. Trails proposed to be located in landslide or erosion hazard areas shall be constructed in a manner that does not increase the risk of landslide or erosion and in accordance with an approved geotechnical report;

5. Selective vegetation removal activities. The following vegetation removal activities, provided that no vegetation shall be removed from a critical area or its management zone without approval from the director, are allowed:

    a. The removal of invasive plant species including Himalayan blackberry (*Rubus discolor, R. procerus*), Evergreen blackberry (Rubus laciniatus), English Ivy as well as any other noxious weed or invasive plant species acknowledged by the City of Camas, with hand labor and light equipment (e.g. push mowers, powered trimmers, etc.);

    b. The removal of trees that are hazardous, posing a threat to public safety, or posing an imminent risk of damage to private property, from critical areas and management zones, provided that:

        i. The applicant submits a report from a certified arborist, registered landscape architect, or professional forester that documents the hazard and provides a replanting schedule for the replacement trees;

        ii. Tree cutting shall be limited to limbing and crown thinning, unless otherwise justified by a qualified professional. Where limbing or crown thinning is not sufficient to address the hazard, trees should be topped to remove the hazard rather than cut at or near the base of the tree;

        iii. The landowner shall replace any trees that are felled or topped with new trees at a ratio of two replacement trees for each tree felled or topped (2:1) within one (1)

year in accordance with an approved restoration plan. Tree species that are native and indigenous to the site and a minimum caliper of two (2) inches shall be used;

iv. If a tree to be removed provides critical habitat, such as an eagle perch, a qualified wildlife biologist shall be consulted to determine timing and methods or removal that will minimize impacts; and

v. Hazard trees determined to pose an imminent threat or danger to public health or safety, or to public or private property, or serious environmental degradation may be removed or topped by the landowner prior to receiving written approval from City of Camas provided that within fourteen (14) days following such action, the landowner shall submit a restoration plan that demonstrates compliance with these provisions;

c. Measures to control a fire or halt the spread of disease or damaging insects consistent with the State Forest Practices Act; Chapter 76.09 RCW, and Camas Fire Department requirements provided that the removed vegetation shall be replaced in-kind or with similar native species within one (1) year in accordance with an approved restoration plan.

6. Chemical applications. The application of herbicides, pesticides, organic or mineral-derived fertilizers, or other hazardous substances, provided that their use shall be restricted in accordance with Department of Fish and Wildlife Management Recommendations, and the regulations of the Department of Agriculture and the U.S. Environmental Protection Agency;[1]

7. Minor site investigative work. Work necessary for land use submittals, such as surveys, soil logs, percolation tests, and other related activities, where such activities do not require construction of new roads or significant amounts of excavation. In every case, impacts to the critical area shall be minimized and disturbed areas shall be immediately restored; and

8. Navigational aids and boundary markers. Construction or modification of navigational aids and boundary markers.

16.50.130 Review required

Mapping. The approximate location and extent of critical areas are shown on the adopted critical area maps. These maps are to be used as a guide for the City of Camas, project applicants and/or property owners, and may be continually updated as new critical areas are identified. They are a reference and do not provide a final critical area designation or delineation.

[1] More information on commercial and residential use of chemicals can be found in Department of Ecology "Guidance Document for Establishment of Critical Aquifer Recharge Areas Ordinances" Version 3.0, Publication #97-30; and from the state Department of Agriculture, http://www.wa.gov/agr/.

If the proposed activity is within, adjacent to, or is likely to impact a critical area, the City of Camas shall require a critical area report from the applicant that has been prepared by a qualified professional. If the report concludes that there is a critical area present then the City of Camas shall:

A. Review and evaluate the critical area report;

B. Determine whether the development proposal conforms to the purposes and performance standards of these provisions;

C. Assess potential impacts to the critical area and determine if they are necessary and unavoidable; and

D. Determine if any mitigation proposed by the applicant is sufficient to protect the functions and values of the critical area and public health, safety, and welfare concerns consistent with the goals, purposes, objectives, and requirements of these provisions.

16.50.140 Critical area reporting evaluation – Requirements

A. Incorporating best available science. The critical area report shall use scientifically valid methods and studies in the analysis of critical area data and field reconnaissance and reference the source of science used. The critical area report shall evaluate the proposal and the likelihood of all probable adverse impacts to critical areas in accordance with these provisions.

B. Minimum report contents. At a minimum, the report shall contain the following:

1. The name and contact information of the applicant, a description of the proposal, and identification of the permit requested;

2. A copy of the site plan for the development proposal showing, identified critical areas, management zones, property lines, limits of any areas to be cleared; and a description of the proposed stormwater management plan for the development and consideration of impacts to drainage alterations;

3. The dates, names, and qualifications of the persons preparing the report and documentation of any fieldwork performed on the site;

4. Identification and characterization of critical areas, wetlands, water bodies, and management zones within the proposed project area;

5. A description of reasonable efforts made to avoid, minimize, and mitigate impacts to critical areas;

6. A proposal for financial guarantees to ensure compliance; and

7. Any additional information required for the critical area as specified in the corresponding Chapter.

C. Unless otherwise provided, a critical area report may be supplemented by or composed, in whole or in part, of any reports or studies required by other laws and regulations or

previously prepared for and applicable to the development proposal site, as approved by the director.

16.50.150 Critical area report – modifications to requirements

A. Limitations to study area. The director may limit or extend the required geographic area of the critical area report as deemed appropriate, so long as it is within the proposed site.

B. Modifications to required contents. The applicant may consult with the director prior to or during preparation of the critical area report to obtain City of Camas written approval for modifications to the required contents of the report where, in the judgment of a qualified professional, more or less information is required to adequately address the probable critical area impacts and required mitigation.

C. Additional information may be required. The director may require additional information to be included in the critical area report when determined to be necessary to the review of the proposed activity in accordance with these provisions. Additional information that may be required, includes, but is not limited to:

1. Historical data, including original and subsequent mapping, aerial photographs, data compilations and summaries, and available reports and records relating to the site or past operations at the site;

2. Grading and drainage plans; and

3. Information specific to the type, location, and nature of the critical area.

16.50.160 Mitigation requirements

A. The applicant shall avoid all impacts that degrade the functions and values of a critical area or areas. Unless otherwise provided in these provisions, if alteration to the critical area is necessary, all adverse impacts to or from critical areas and management zones resulting from a development proposal or alteration shall be mitigated in accordance with an approved critical area report and SEPA documents.

B. Mitigation should be in-kind and on-site, when possible, and sufficient to maintain the functions and values of the critical area, and to prevent risk from a hazard posed by a critical area.

C. Mitigation shall only be implemented after City of Camas approval of a critical area report that includes a mitigation plan, and mitigation shall be in accordance with the provisions of the approved critical area report.

16.50.170 Mitigation sequencing.

Applicants shall demonstrate that reasonable efforts have been examined with the intent to mitigate impacts to critical areas. When an alteration to a critical area is proposed, mitigation can be accomplished through a variety of methods. Generally, avoiding the impact altogether is the preferred option. Methods to reduce impacts and mitigate for them should follow a series of steps taken in sequential order:

A. Avoiding the impact altogether by not taking a certain action or parts of an action (usually by either finding another site or changing the location on the site);

B. Minimizing impacts by limiting the degree or magnitude of the action and its implementation, by using appropriate technology, or by taking affirmative steps, such as project design, developable area configuration, relocation, or timing, to avoid or reduce impacts;

C. Minimizing or eliminating the hazard by restoring or stabilizing the hazard area through engineered or other methods;

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

E. Compensating for the impact to critical areas by replacing, enhancing, or providing substitute resources or environments;

F. Monitoring the hazard or other required mitigation and taking remedial action when necessary; and

G. Rectifying the impact to critical areas by repairing, rehabilitating, or restoring the affected environment to the historical conditions or the conditions existing at the time of the initiation of the project.

Following this process is referred to as mitigation sequencing and mitigation for individual actions may include a combination of the above measures.

16.50.180 Mitigation plan requirements.

When mitigation is required, the applicant shall submit to the City of Camas a mitigation plan as part of the critical area report. The mitigation plan shall include:

A. Environmental goals and objectives. The mitigation plan shall include a written report identifying environmental goals and objectives of the compensation proposed and including:

1. A description of the anticipated impacts to the critical areas and the mitigating actions proposed and the purposes of the compensation measures, including the site selection criteria; identification of compensation goals; identification of resource functions; and dates for beginning and completion of site compensation construction activities. The goals and objectives shall be related to the functions and values of the impacted critical area;

2. An analysis of the likelihood of success of the mitigation project.

B. Performance standards. The mitigation plan shall include measurable specific criteria for evaluating whether or not the goals and objectives of the mitigation project have been successfully attained and whether or not the requirements of these provisions have been met.

C. Detailed construction plans. The mitigation plan shall include written specifications and descriptions of the mitigation proposed including but not limited to: The proposed construction sequence, timing, and duration; Grading and excavation details; Erosion and sediment control features; A planting plan specifying plant species, quantities, locations, size, spacing, and density; and, measures to protect and maintain plants until established.

These written specifications shall be accompanied by detailed site diagrams, scaled cross-sectional drawings, topographic maps showing slope percentage and final grade

elevations, and any other drawings appropriate to show construction techniques or anticipated final outcome.

D. Monitoring program. The mitigation plan shall include a program for monitoring construction of the compensation project, and for assessing a completed project. A protocol shall be included outlining the schedule for site monitoring (for example, monitoring shall occur in years 1, 3 and 5 after site construction), and how the monitoring data will be evaluated to determine if the performance standards are being met. A monitoring report shall be submitted as needed to document milestones, successes, problems, and contingency actions of the compensation project. The compensation project shall be monitored for a period necessary to establish that performance standards have been met, but not for a period less than five (5) years.

E. Contingency plan. The mitigation plan shall include identification of potential courses of action, and any corrective measures to be taken if monitoring or evaluation indicates project performance standards are not being met.

F. Financial guarantees. The mitigation plan shall include financial guarantees, as determined by the approval authority, to ensure that the mitigation plan is fully implemented. Financial guarantees ensuring fulfillment of the compensation project, monitoring program, and any contingency measures shall be posted consistent with these provisions.

16.50.190 Innovative mitigation

The City of Camas may encourage, facilitate, and approve innovative mitigation projects. Advance mitigation or mitigation banking are examples of alternative mitigation projects allowed under the provisions of this Section wherein one or more applicants, or an organization with demonstrated capability, may undertake a mitigation project together if it is demonstrated that all of the following circumstances exist:

A. Creation or enhancement of a larger system of critical areas and open space is preferable to the preservation of many individual habitat areas;

B. The group demonstrates the organizational and fiscal capability to act cooperatively;

C. The group demonstrates that long-term management of the habitat area will be provided; and,

D. There is a clear potential for success of the proposed mitigation at the identified mitigation site.

E. Conducting mitigation as part of a cooperative process does not reduce or eliminate the required replacement ratios.

16.50.200 Unauthorized critical area alterations and enforcement

A. When a critical area or its management zone has been altered in violation of these provisions, all ongoing development work shall stop and the critical area shall be restored. The City of Camas shall have the authority to issue a stop work order to cease all ongoing development work, and order restoration, rehabilitation or replacement measures at the owner's or other responsible party's expense to compensate for violation of these provisions.

B. Restoration plan required. Where a violation has occurred, all development work shall remain stopped until a restoration plan is submitted by the property owner and/or violator

(applicant) and approved by City of Camas. Such a plan shall be prepared by a qualified professional and shall describe how the actions proposed meet the intent of requirements described in Subsection (C). The director may, at the applicant's expense, seek expert advice in determining the adequacy of the plan and may impose additional requirements to mitigate critical areas issues.

C. Minimum performance standards for restoration.
   1. For alterations to critical aquifer recharge areas and frequently flooded areas, the following minimum performance standards shall be met for the restoration of a critical area, provided that if the violator can demonstrate that greater functional and habitat values can be obtained, these standards may be modified:

      a. The historic structural and functional values shall be restored, including water quality and habitat functions;

      b. The historic soil types and configuration shall be replicated;

      c. The critical area and management zones shall be replanted with native vegetation that replicates the vegetation historically found on the site in species types, sizes, and densities; and

      d. The historic functions and values should be replicated at the location of the alteration.

   2. For alterations to frequently flooded and geological hazardous areas, the following minimum performance standards shall be met for the restoration of a critical area, provided that, if the violator can demonstrate that greater safety can be obtained, these standards may be modified:

      a. The hazard shall be reduced to a level equal to, or less than, the pre-development hazard;

      b. Any risk of personal injury resulting from the alteration shall be eliminated or minimized; and

      c. The hazard area and management zones shall be replanted with native vegetation sufficient to minimize the hazard.

D. Enforcement. Violations and compliance issues under these provisions are subject to enforcement under CMC 18.55.

16.50.210 Critical area markers, signs and fencing

A. Temporary markers. The outer perimeter of the management zones and/or critical areas may be required to be marked in the field in such a way as to ensure that no unauthorized intrusion will occur, and verified by the director prior to the commencement of permitted activities. This temporary marking, if required, shall be maintained throughout construction, and shall not be removed until permanent signs, if required, are in place.

B. Permanent signs. The City may require as a condition of any permit or authorization issued pursuant to this Chapter, that the applicant install permanent signs along the boundary of a critical area or management zone to city standards.

C. Fencing

1. The director may condition any permit or authorization issued pursuant to this Chapter to require the applicant to install a permanent fence to city specifications at the edge of the habitat conservation area or management zone, when in the opinion of the city, fencing will reasonably minimize or prevent future impacts to the habitat conservation area.

2. Fencing installed as part of a proposed activity or as required in this Subsection shall be designed so as to not interfere with species migration, including fish runs, and shall be constructed in a manner that minimizes habitat impacts.

16.50.220 Notice on title

A. The proponent of any new development proposal which involves a critical area or management zone may be required to file a notice with the Clark County records and elections division. The notice, if required, shall state the presence of the critical area or management zone on the property, of the application of these provisions to the property, and the fact that limitations on actions in or affecting the critical area or management zone may exist. The notice shall run with the land.

B. This notice on title shall not be required for a development proposal by a public agency or public or private utility:

1. Within a recorded easement or right-of-way;

2. Where the agency or utility has been adjudicated the right to an easement or right-of-way; or

3. On the site of a permanent public facility.

C. The applicant shall submit proof that the notice has been filed for public record before the City of Camas approves any development proposal for the property or, in the case of subdivisions, short subdivisions, planned unit developments, and binding site plans, at or before recording.

16.50.230 Native growth protection areas - Reserved

16.50.240 Critical area protective mechanism

A. Identified critical areas and their associated buffer or management zones shall be protected and preserved through a permanent protective mechanism acceptable to the City. This may include placing the critical area and its associated buffer or management zone in a separate tract; executing a protective easement; or dedicating the critical area and its associated buffer or management zone to a public agency or public or private land trust. The mechanism shall provide for maintenance of the critical area and its associated buffer or management zone.

B. If the protective mechanism includes placing the critical area and its associated buffer or management zone in a separate tract, then the critical area tract(s) shall:

1. Be recorded on all documents of title of record for all affected lots;

2. Be designated on the face of the plat or recorded drawing in a format approved by the City. The designation shall include the following restriction:

   a. An assurance that native vegetation will be preserved for the purpose of preventing harm to property and the environment, including, but not limited to, controlling surface water runoff and erosion, maintaining slope stability, management zoning, and protecting plants and animal habitat; and

   b. The right of the City of Camas to enforce the terms of the restriction.

C. The City of Camas may require that any required critical area tract be dedicated to the City of Camas, or held by an incorporated homeowner's association or other legal entity.

16.50.250 Bonds to ensure mitigation, maintenance, and monitoring

A. When mitigation required pursuant to a development proposal is not completed prior to the City of Camas final permit approval, such as final plat approval, the City of Camas shall require the applicant to post a performance bond or other security in a form and amount deemed acceptable by the City of Camas. If the development proposal is subject to mitigation, the applicant shall post a mitigation bond or other security in a form and amount deemed acceptable by the City of Camas to ensure mitigation is fully functional.

B. The bond shall be in the amount of one hundred and twenty-five percent (125%) of the estimated cost of the uncompleted actions or the estimated cost of restoring the functions and values of the critical area that are at risk, whichever is greater.

C. The bond may be in the form of a surety bond, performance bond, assignment of savings account, or an irrevocable letter of credit guaranteed by an acceptable financial institution with terms and conditions acceptable to the City of Camas attorney.

D. Bonds or other security authorized by this Section shall remain in effect until the City of Camas determines, in writing, that the standards bonded for have been met.

E. Depletion, failure, or collection of bond funds shall not discharge the obligation of an applicant or violator to complete required mitigation, maintenance, monitoring, or restoration.

F. Public development proposals may be relieved from having to comply with the bonding requirements of this Section if public funds have previously been committed for mitigation, maintenance, monitoring, or restoration.

G. Any failure to satisfy critical area requirements established by law or condition including, but not limited to, the failure to provide a monitoring report within thirty (30) days after it is due or comply with other provisions of an approved mitigation plan shall constitute a default, and the City of Camas may demand payment of any financial guarantees or require other action authorized by the City of Camas code or any other law.

H. Any funds recovered pursuant to this section shall be used to complete the required mitigation.

Chapter 16.60 Wetlands

(Reserved)

Chapter 16.70 Critical Aquifer Recharge Areas

Sections:

16.70.010 Critical aquifer recharge areas designation. Critical aquifer recharge areas (CARA) are those areas with a critical recharging effect on aquifers used for potable water as defined by WAC 365-190-030(2). CARA have prevailing geologic conditions associated with infiltration rates that create a high potential for contamination of ground water resources or contribute significantly to the replenishment of ground water. These areas include the following:

A. Wellhead protection areas. Wellhead protection areas shall be defined by the boundaries of the ten (10) year time of ground water travel, or boundaries established using alternate criteria approved by the Department of Health in those settings where ground water time of travel is not a reasonable delineation criterion, in accordance with WAC 246-290-135.

B. Sole source aquifers. Sole source aquifers are areas that have been designated by the U.S. Environmental Protection Agency pursuant to the Federal Safe Water Drinking Act.

C. Susceptible ground water management areas. Susceptible ground water management areas are areas that have been designated as moderately or highly vulnerable or susceptible in an adopted ground water management program developed pursuant to Chapters 173-100 WAC.

D. Special protection areas. Special protection areas are those areas defined by WAC 173-200-090.

E. Moderately or highly vulnerable aquifer recharge areas. Aquifer recharge areas that are moderately or highly vulnerable to degradation or depletion because of hydrogeologic characteristics are those areas delineated by a hydrogeologic study prepared in accordance with the state Department of Ecology guidelines.

F. Moderately or highly susceptible aquifer recharge areas. Aquifer recharge areas moderately or highly susceptible to degradation or depletion because of hydrogeologic characteristics are those areas meeting the criteria established by the state Department of Ecology.

16.70.020 Aquifer recharge area susceptibility ratings. Aquifer recharge areas shall be rated as having high, moderate, or low susceptibility based on soil permeability, geologic matrix, infiltration, and depth to water as determined by the criteria established by the state Department of Ecology.

16.70.030 Mapping of critical aquifer recharge areas

A. The approximate location and extent of critical aquifer recharge areas are shown on the adopted critical area maps.

B. These maps are to be used as a guide for the City of Camas, project applicants and/or property owners, and may be continuously updated as new critical areas are identified. They are a reference and do not provide a final critical area designation.

16.70.040 Activities allowed in critical aquifer recharge areas. The following activities are allowed in critical aquifer recharge areas in addition to those pursuant to *Allowed activities* [Section 16.50.130], and do not require submission of a critical area report:

A. Construction of structures and improvements, including additions, resulting in less than five percent (5%) or 2500 square feet (whichever is greater) total site impervious surface area that do not result in a change of use or increase the use of a hazardous substance.

B. Development and improvement of parks, recreation facilities, open space, or conservation areas resulting in less than five percent (5%) total site impervious surface area and that does not increase the use of a hazardous substance.

C. Development within CARA's shall not result in the loss of more than 40% of the total pervious surface of the site.

16.70.050 Critical area report – Requirements for critical aquifer recharge areas

A. Prepared by a qualified professional. An aquifer recharge area critical area report shall be prepared by a qualified professional who is a hydrogeologist, geologist, or engineer, who is licensed in the state of Washington and has experience in preparing hydrogeologic assessments.

B. Hydrogeologic assessment required. For all proposed activities to be located in a critical aquifer recharge area, a critical area report shall contain a level one (1) hydrogeological assessment. A level one (1) hydrogeologic assessment shall be required for any of the following proposed activities:

1. Activities that result in five percent (5%) or more, or 2,500 square feet of impervious site area;

2. Activities that divert, alter, or reduce the flow of surface or ground waters, or otherwise reduce the recharging of the aquifer;

3. The use of hazardous substances, other than household chemicals used according to the directions specified on the packaging for domestic applications;

4. The use of injection wells; or

5. Any other activity determined by the director likely to have an adverse impact on ground water quality or quantity, or on the recharge of the aquifer.

C. Level one hydrogeologic assessment. A level one hydrogeologic assessment shall include the following site- and proposal-related information at a minimum:

1. Available information regarding geologic and hydrogeologic characteristics of the site including the surface location of all critical aquifer recharge areas located on site or immediately adjacent to the site, and permeability of the unsaturated zone;

2. Ground water depth, flow direction and gradient based on available information;

3. Currently available data on wells and springs within 1,300 feet of the project area;

4. Location of other critical areas, including surface waters, within 1,300 feet of the project area;

5. Available historic water quality data for the area to be affected by the proposed activity; and

6. Best management practices proposed to be utilized.

D. Level two hydrogeologic assessment. A level two hydrogeologic assessment shall include the following site- and proposal-related information at a minimum, in addition to the requirements for a level one hydrogeological assessment:

1. Historic water quality data for the area to be affected by the proposed activity compiled for at least the previous five (5) year period;

2. Ground water monitoring plan provisions; and

3. Discussion of the effects of the proposed project on the ground water quality and quantity, including:

   a. Predictive evaluation of ground water withdrawal effects; and

   b. Predictive evaluation of contaminant transport based on potential releases to ground water; and

4. A spill plan that identifies equipment and/or structures that could fail, resulting in an impact. Spill plans shall include provisions for regular inspection, repair, and replacement of structures and equipment that could fail.

16.70.060 Performance standards – General requirements

A. Activities may only be permitted in a critical aquifer recharge area if the applicant can show that the proposed activity will not cause contaminants to enter the aquifer and that the proposed activity will not adversely effect the recharging of the aquifer.

B. The critical areas report shall identify and demonstrate that measures will be taken to prevent aquifer contamination from vehicular repair, residential use of pesticides and nutrients, spreading or injection of reclaimed water and storage tanks.

C. The proposed activity must comply with the water source protection requirements and recommendations of the federal Environmental Protection Agency, state Department of Health, and the local health district.

D. The proposed activity must be designed and constructed in accordance with the *City of Camas Design Standards Manual*.

16.70.070 Performance standards – Specific uses

A. Storage Tanks. All storage tanks proposed to be located in a critical aquifer recharge area must comply with local building code requirements and must conform to the following requirements:

1. Underground Tanks. All new underground storage facilities proposed for use shall be designed and constructed so as to:

   a. Prevent releases due to corrosion or structural failure for the operational life of the tank;

   b. Be protected against corrosion, constructed of noncorrosive material, steel clad with a noncorrosive material, or designed to include a secondary containment system to prevent the release or threatened release of any stored substances; and,

   c. Use material in the construction or lining of the tank that is compatible with the substance to be stored.

2. Aboveground Tanks. All new aboveground storage facilities proposed for use in the storage of hazardous substances or hazardous wastes shall be designed and constructed so as to:

   a. Not allow the release of a hazardous substance to the ground, ground waters, or surface waters;

   b. Have a primary containment area enclosing or underlying the tank or part thereof; and

   c. A secondary containment system either built into the tank structure or a dike system built outside the tank for all tanks.

B. No dry wells shall be allowed in critical aquifer recharge areas. Dry wells existing on the site prior to facility establishment must be abandoned using techniques approved by the state Department of Ecology prior to commencement of the proposed activity.

C. Residential use of pesticides and nutrients. Application of household pesticides, herbicides, and fertilizers shall not exceed times and rates specified on the packaging.

D. Spreading or injection of reclaimed water. Water reuse projects for reclaimed water must be in accordance with the adopted water or sewer comprehensive plans that have been approved by the departments of Ecology and Health.

1. Surface spreading must meet the ground water recharge criteria given in Chapter 90.46.080 RCW and Chapter 90.46.010(10).

2. Direct injection must be in accordance with the standards developed by authority of Chapter 90.46.042 RCW.

E. State and federal regulations. The uses listed below shall be conditioned as necessary to protect critical aquifer recharge areas in accordance with the applicable state and federal regulations.

Statutes, Regulations, and Guidance Pertaining to Ground Water Impacting Activities

Activity	Statute - Regulation - Guidance
Above Ground Storage Tanks	Chapter 173-303 -640 WAC
Animal Feedlots	Chapter 173-216 WAC, Chapter 173-220 WAC
Automobile Washers	Chapter 173-216 WAC, Best Management Practices for Vehicle and Equipment Discharges (WDOE WQ-R-95-56)
Below Ground Storage Tanks	Chapter 173-360 WAC
Chemical Treatment Storage and Disposal Facilities	Chapter 173-303-182 WAC
Hazardous Waste Generator (*Boat Repair Shops, Biological Research Facility, Dry Cleaners, Furniture Stripping, Motor Vehicle Service Garages, Photographic Processing, Printing and Publishing Shops, etc.)*	Chapter 173-303 WAC
Injection Wells	Federal 40 CFR Parts 144 and 146, Chapter 173-218 WAC
Junk Yards and Salvage Yards	Chapter 173-304 WAC, Best Management Practices to Prevent Stormwater Pollution at Vehicles Recycler Facilities (WDOE 94-146)
Oil and Gas Drilling	Chapter 332-12-450 WAC, WAC , Chapter 173-218 WAC
On-Site Sewage Systems (Large Scale)	Chapter 173-240 WAC
On-Site Sewage Systems (< 14,500 gal/day)	Chapter 246-272 WAC, Local Health Ordinances
Pesticide Storage and Use	Chapter 15.54 RCW, Chapter 17.21 RCW
Sawmills	Chapter 173-303 WAC, 173-304 WAC, Best Management Practices to Prevent Stormwater Pollution at Log Yards (WDOE 95-53)
Solid Waste Handling and Recycling Facilities	Chapter 173-304 WAC
Surface Mining	Chapter 332-18-015 WAC
Waste Water Application to Land Surface	Chapter 173-216 WAC, Chapter 173-200 WAC, WDOE Land Application Guidelines, Best Management Practices for Irrigated Agriculture

16.70.080 Uses prohibited from critical aquifer recharge areas. The following activities and uses are prohibited in critical aquifer recharge areas:[2]

A. Landfills. Landfills, including hazardous or dangerous waste, municipal solid waste, special waste, woodwaste, and inert and demolition waste landfills;

B. Underground injection wells. Class I, III, and IV wells and subclasses 5F01, 5D03, 5F04, 5W09, 5W10, 5W11, 5W31, 5X13, 5X14, 5X15, 5W20, 5X28, and 5N24 of Class V wells;

[2] Prohibited uses are based on "Guidance Document for the Establishment of Critical Aquifer Recharge Area Ordinances," by Ecology, July 2000, publication #97-30 and local concerns.

C. Mining
   1. Metals and hard rock mining.

   2. Sand and gravel mining.

D. Wood Treatment Facilities. Wood treatment facilities that allow any portion of the treatment process to occur over permeable surfaces (both natural and manmade);

E. Storage, processing, or disposal of radioactive substances. Facilities that store, process, or dispose of radioactive substances.

F. Fuel and/or gas stations.

G. Vehicle Repair and servicing.

H. Oil and Lubricant centers.

I. Other
   1. Activities that would significantly reduce the recharge to aquifers currently or potentially used as a potable water source;

   2. Activities that would significantly reduce the recharge to aquifers that are a source of significant baseflow to a regulated stream;

   1. Activities that are not connected to an available sanitary sewer system are prohibited from critical aquifer recharge areas associated with sole source aquifers.

   4. Underground storage tanks for the use and storage of hazardous substances or hazardous materials.

Chapter 16.80 Frequently Flooded Areas

Sections:

16.80.010 Designation of frequently flooded areas

A. Frequently flooded areas. Frequently flooded include:
The areas of special flood hazard identified by the Federal Insurance Administration in a scientific and engineering report entitled "The Flood Insurance Study for City of Camas dated February 18, 1981, with accompanying flood insurance maps. The Flood Insurance Study and accompanying maps are hereby adopted by reference, declared part of this Chapter. These are minimum designations; the director may identify additional areas.

B. Use of additional information. The director may use additional flood information that is more restrictive or detailed than that provided in the Flood Insurance Study conducted by the Federal Emergency Management Agency (FEMA) to designate frequently flooded areas, including data on channel migration, historical data, high water marks, photographs of past flooding, location of restrictive floodways, maps showing future build-out conditions, maps that show riparian habitat areas, or similar information.

C. Flood elevation data. When base flood elevation data is not available (A and V zones), the director shall obtain, review, and reasonably utilize any base flood elevation and floodway data available from a federal, state, or other source, in order to administer this Chapter.

D. Designation made by director. The flood insurance maps are to be used as a guide for the City of Camas, project applicants and/or property owners, and the public, and should be considered a minimum designation of frequently flooded areas. As flood insurance maps may be continuously updated as areas are reexamined or new areas are identified, the best available information for flood hazard area identification shall be the basis for regulation.

16.80.020 Critical area report – Additional requirements

A. Prepared by a qualified professional. A frequently flooded areas report shall be prepared by a qualified professional who is a hydrologist, or engineer, who is licensed in the state of Washington with experience in preparing flood hazard assessments.

B. Area addressed in critical area report. The following areas shall be addressed in a critical area report for frequently flooded areas:

1. The site area of the proposed activity;

2. All areas of a special flood hazard area, as indicated on the flood insurance map(s) within three hundred (300) feet of the project area; and

3. All other flood areas indicated on the flood insurance map(s) within three hundred (300) feet of the project area.

C. Flood hazard assessment required. A critical area report for a proposed activity within a frequently flooded area shall contain a flood hazard assessment including the following site- and proposal-related information at a minimum:

1. Site and construction plans. A copy of the site and construction plans for the development proposal showing:

   a. Flood plain (100-year flood elevation), 10- and 50-year flood elevations, floodway, other critical areas, management zones, and shoreline areas;

   b. Proposed development, including the location of existing and proposed structures, fill, storage of materials, and drainage facilities, with dimensions indicating distances to the flood plain;

   c. Clearing limits; and

   d. Elevation of the lowest floor (including basement) of all structures, and the level to which any structure has been floodproofed;

2. Floodproofing certificate. When floodproofing is proposed, a certification by a registered professional engineer or architect that the floodproofing methods meet the requirements section CMC 16.80.040 (G); and

3. Watercourse alteration. When watercourse alteration is proposed, the critical area report shall include:

   a. Extent of watercourse alteration. A description of and plan showing the extent to which a watercourse will be altered or relocated as a result of proposal; and

   b. Maintenance program required for watercourse alterations. A maintenance program that provides maintenance practices for the altered or relocated portion of the watercourse to ensure that the flood carrying capacity is not diminished.

D. Information regarding other critical areas. Potential impacts to wetlands, fish and wildlife habitat, and other critical areas shall be addressed in accordance with the applicable sections of these provisions.

16.80.030 Warning and disclaimer of liability. The degree of flood protection required by this Chapter is considered reasonable for regulatory purposes and is based on scientific and engineering considerations. Larger floods can and will occur on rare occasions. Flood heights may be increased by man-made or natural causes. This ordinance does not imply that land outside frequently flooded areas or uses permitted within such areas will be free from flooding or flood damages. This ordinance shall not create liability on the part of City of Camas, any officer or employee thereof, or the Federal Insurance Administration, for any flood damages that result from reliance on this ordinance or any administrative decision lawfully made hereunder.

16.80.040 Performance standards – General requirements

A. Development permit required. A development permit shall be obtained before land is altered or a new use is commenced within a frequently flooded area. For application of this Chapter, development shall include any man-made alteration to land, including but not limited to buildings, structures, mining, dredging, filling, grading, paving, excavation, drilling operations, or storage of equipment or materials within the area of special flood hazard.

B. All necessary permits shall be obtained. The applicant shall provide verification to the City that all necessary permits have been obtained from those governmental agencies from which prior approval is required by federal, state, or local law including Section 404 of the Federal Water Pollution Control Act Amendment of 1972 and the Endangered Species Act of 1973.

C. New construction shall not increase the base flood elevation more than one (1) inch. When the base flood elevation is provided, new construction, substantial improvements, or other development, including fill, shall not be permitted within frequently flooded areas, unless it is demonstrated that the cumulative effect of the proposed development, when combined with all other existing and anticipated development, will not increase the water surface elevation of the base flood more than one (1) inch at any point.

D. Areas without base flood elevation data. Where base flood elevation data is not available (A and V zones), and there is insufficient data available from federal, state, or other sources, the director shall determine the base flood elevation using historical data, high water marks, photographs of past flooding, and other available information. If there is insufficient data available for the director to make a determination of the base flood elevation, and standards requiring a base flood elevation cannot be implemented, the director shall require measures that assure the proposed structures will be reasonably safe from flooding.

E. Construction materials and methods
   1. Methods that minimize flood damage. All new construction and substantial improvements shall be constructed using flood resistant materials and utility equipment, and with methods and practices, that minimize flood damage.

   2. Structures shall be located outside the flood plain. All structures, utilities and other improvements shall be located outside of the flood plain except as provided by this chapter. For sites with no buildable area out of the flood plain, structures may be allowed provided they are placed on the highest land on the site, oriented parallel to flow rather than perpendicular, and sited as far from the watercourse and other critical areas as possible. If the director detects any evidence of active hyporheic exchange on a site, the development shall be located to minimize disruption of such exchange.

   3. Utilities shall be protected. 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.

F. Elevation certificate required following construction. Following construction of a structure within the flood plain where the base flood elevation is provided, the applicant shall obtain an elevation certificate from a registered professional engineer or architect that records the elevation of the lowest floor.

G. Floodproofing
   1. When a structure is to be floodproofed, it shall be designed and constructed using methods that meet the following requirements:

      a. Watertight structure. The structure shall be watertight with walls substantially impermeable to the passage of water below one (1) foot above the base flood level;

      b. Hydrostatic resistance. Structural components shall be capable of resisting hydrostatic and hydrodynamic loads and effects of buoyancy;

      c. Certified by a registered professional engineer or architect. The structure shall be certified by a registered professional engineer or architect that the design and methods of construction are in accordance with accepted standards of practice for meeting provisions of this Subsection based on their development and/or review of the structural design, specifications and plans.

   2. Floodproofing certificate required following construction. Following construction of the structure, the applicant shall obtain a floodproofing certificate from a registered professional engineer or architect that records the actual (as-built) elevation to which the structure was floodproofed.

H. Anchoring
   All new construction and substantial improvements within the flood plain shall be anchored to prevent flotation, collapse, or lateral movement of the structure.

I. Fill and grading.
   Fill and grading within the flood plain shall only occur upon a determination from a qualified professional that the fill or grading will not block side channels, inhibit channel migration, increase flood hazards to others, or be placed within a channel migration zone, whether or not the City has delineated such zones as of the time of the application.

16.80.050 Performance standards – Specific uses.
In all frequently flooded areas the following standards are required:

A. Residential units
   1. Must be above base flood elevation. New construction or placement of residential units and substantial improvement of any residential structure shall have the lowest floor, including basement, elevated one (1) foot[3] or more above the base flood elevation.

   2. Areas below the lowest floor. 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. 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:

[3] NFIP requirement is to be elevated to the base flood elevation. To reduce insurance rates and to account for uncertainties inherent in flood hazard modeling and mapping, many jurisdictions use a standard of one foot or more above the BSE, as suggested here.

a. 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;

b. The bottom of all openings shall be no higher than one (1) foot above grade; and

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

B. Nonresidential construction

1. Must be above base flood elevation. Construction and substantial improvement of any commercial, industrial or other nonresidential structure shall either have the lowest floor, including basement, elevated one foot or more above the base flood elevation, or, together with attendant utility and sanitary facilities, shall be flood proofed in accordance with *Floodproofing* [Section .040(G)]. Unavoidable impacts to flooded areas (from fill) need to be mitigated.

2. Areas below the lowest floor. Fully enclosed areas below the lowest floor that are not floodproofed shall be designed to automatically equalize hydrostatic flood forces on exterior walls by allowing for the entry and exit of floodwaters. Designs for meeting this requirement must either be certified by a registered professional engineer or architect, or must meet or exceed the following minimum criteria:

a. A minimum of three 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;

b. The bottom of all openings shall be no higher than one (1) foot above grade; and

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

C. Utilities

1. Shall be designed to minimize infiltration of floodwaters. All new and replacement water supply systems shall be designed to preclude infiltration of floodwaters into the systems.

2. Sanitary sewage systems. New and replacement sanitary sewage systems shall be designed to minimize or eliminate infiltration of floodwaters into the systems and discharges from the systems into floodwaters.

3. On-site waste disposal systems. On-site waste disposal systems shall be located to avoid impairment to them or contamination from them during flooding. New on-site sewage disposal systems are prohibited pursuant to *Uses and activities prohibited from frequently flooded areas* [Section .070(C)].

D. Subdivision/land division proposals.

1. All land division proposals shall:

a. Minimize flood damage. Subdivisions, short subdivisions, planned developments and binding site plans shall be designed to minimize or eliminate flood damage to proposed structures; and public utilities and facilities that are installed as part of such subdivisions, such as sewer, gas, electrical, and water systems, shall be located and

constructed to minimize flood damage; subdivisions should be designed using natural features of the landscape, and should not incorporate "flood protection" changes.

b. Have adequate drainage. Subdivisions, short subdivisions, planned developments and binding site plans shall have adequate natural surface water drainage in accordance with City requirements to reduce exposure to flood hazards; and

c. Show flood areas on plat maps. Subdivisions, short subdivisions, planned developments and binding site plans shall show the 100-year flood plain, floodway, and channel migration zone on the preliminary and final plat and short plat maps.

2. Lots: No lot or portion of lot after the effective dated of this ordinance, shall be established within the boundaries of a frequently flooded area.

E. **Alteration of watercourses**

1. Shall be in accordance with habitat regulations. Watercourse alterations shall only be allowed in accordance with the *Fish and wildlife habitat conservation areas* [Chapter 16.95].

2. Shall not result in blockage. Watercourse alteration projects shall not result in blockage of side channels.

3. Notification required. The City of Camas shall notify adjacent communities, the state Department of Ecology, and the Federal Insurance Administration of a proposed watercourse alteration at least fifteen (15) days prior to permit issuance.

4. Maintenance of alterations. The applicant shall maintain the altered or relocated portion of the watercourse to ensure that the flood carrying capacity is not diminished. Maintenance shall be bonded for a period of five years, and be in accordance with an approved maintenance program.

16.80.060 Performance standards – Areas of shallow flooding.

A. Residential structures. New construction and substantial improvements of residential structures and manufactured homes within AO zones shall have the lowest floor (including basement) elevated above the highest grade adjacent to the building, one (1) foot or more above the depth number specified in feet on the flood insurance map or at least two (2) feet above, if no depth number is specified.

B. Nonresidential structures. New construction and substantial improvements of nonresidential structures within AO zones shall either:

1. Have the lowest floor (including basement) elevated above the highest adjacent grade of the building site, one (1) foot or more above the depth number specified on the flood insurance map or 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 as in *Floodproofing* [Section .040.G].

C. Drainage paths. All development shall include adequate drainage paths around structures on slopes to guide floodwaters around and away from proposed structures.

16.80.070 Uses and activities prohibited from frequently flooded areas

A. Critical facilities.
Construction of new critical facilities shall be permissible within frequently flooded areas if no feasible alternative site is available. Critical facilities constructed within frequently flooded areas shall have the lowest floor elevated three feet or more above the level of the base flood elevation (100-year flood). Floodproofing and sealing measures must be taken to ensure that toxic substances will not be displaced by or released into flood waters. Access routes elevated to or above the level of the base flood elevation shall be provided to all critical facilities to the extent possible. Certification by a registered professional engineer is required.

B. Wells.

C. On-site sewage or waste disposal systems.

D. There shall be no increase in residential lots within frequently flooded areas. No additional lots shall be created within a frequently flooded area. Divisions of land after the effective date of this code shall have the frequently flooded areas designated as separate tract(s) and not included within any additional lot.

E. Construction in floodways.
1. New construction requires certification by an engineer. Encroachments, including new construction, substantial improvements, fill, and other development, are prohibited within designated floodways unless certified by a registered professional engineer. Such certification shall demonstrate through hydrologic and hydraulic analyses, performed in accordance with standard engineering practice, that the proposed encroachment will not result in any increase in flood levels during the occurrence of the base flood discharge. Small projects that are solely to protect or create fish habitat and designed by a qualified professional may be allowed without certification if the director determines that the project will not obstruct flood flows. Fish protection projects shall be reviewed on behalf of the City of Camas by a qualified professional in the field of hydraulics.

2. Residential construction and reconstruction prohibited. Construction and reconstruction of residential structures is prohibited within floodways, except for:
   a. Maintenance or repairs to a structure that do not increase the ground floor area; and

   b. Repairs, reconstruction or improvements to a structure, for which the cost does not exceed fifty percent (50%) of the market value of the structure either:

      i. Before the repair, or reconstruction is started; or

      ii, If the structure has been damaged, and is being restored, before the damage occurred;

Improvement to a structure to correct existing violations of state or local health, sanitary, or safety code specifications that have been identified by the City of Camas and that are the minimum necessary to assure safe living conditions or to structures identified as historic places shall not be included in the fifty percent (50%).

16.80.080 Variations – Additional considerations for frequently flooded areas

A. Additional variation considerations. In review of variation requests for activities within frequently flooded areas, the Board of Adjustment shall consider all technical evaluations, relevant factors, standards specified in this Chapter, and:

1. The danger to life and property due to flooding, erosion damage, or materials swept onto other lands during flood events;

2. The susceptibility of the proposed facility and its contents to flood damage and the effect of such damage on the proposed use;

3. The importance of the services provided by the proposed use to the community;

4. The necessity of a waterfront location, and the availability of alternative locations for the proposed use that are not subject to flooding or erosion damage;

5. The safety of access to the property for ordinary and emergency vehicles;

6. 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; and,

7. The costs of providing governmental services during and after flood conditions, including maintenance and repair of public utilities and facilities such as sewer, gas, electrical, and water systems, and streets and bridges.

B. Variations shall only be issued upon a determination that the granting of a variation 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 laws or ordinances.

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

Chapter 16.90 Geologically Hazardous Areas

Section:

16.90.010 Designation of geologically hazardous areas. Geologically hazardous areas include areas susceptible to erosion hazard, landslide hazard, seismic hazard, mine hazard and other geologic events. These areas pose a threat to the health and safety of citizens when incompatible development is sited in areas of significant hazard. Areas susceptible to one or more of the following types of hazards shall be designated as a geologically hazardous area: 1) Erosion hazard; 2) Landslide hazard; 3) Seismic hazard; or, 4) Other geological events including, mass wasting, debris flows, rock falls, and differential settlement.

16.90.020 Designation of specific hazard areas

A. Erosion hazard areas. Erosion hazard areas are at least those areas identified by the U.S. Department of Agriculture's Natural Resources Conservation Service as having a "moderate to severe", "severe," or "very severe" rill and inter-rill erosion hazard.

B. Landslide hazard areas. Landslide hazard areas are areas potentially subject to landslides based on a combination of geologic, topographic, and hydrologic factors. They include areas susceptible because of any combination of bedrock, soil, slope (gradient), slope aspect, structure, hydrology, or other factors. Examples of these may include, but are not limited to the following:

1. Areas of historic failures, such as:

   a. Those areas delineated by the U.S. Department of Agriculture's Natural Resources Conservation Service as having a "severe" limitation for building site development;

   b. Those areas mapped by the Department of Natural Resources (slope stability mapping) as unstable ("U" or class 3), unstable old slides ("UOS" or class 4), or unstable recent slides ("URS" or class 5); or

   c. Areas designated as quaternary slumps, earthflows, mudflows, lahars, or landslides on maps published by the U.S. Geological Survey or Department of Natural Resources;

2. Areas with all of the following characteristics:

   a. Slopes steeper than fifteen percent (15%); and

   b. Hillsides intersecting geologic contacts with a relatively permeable sediment overlying a relatively impermeable sediment or bedrock; and

   c. Springs or ground water seepage;

   Where a site includes 15% slopes, the director will require written verification of the presence or absence of (b) and (c) of this section by a qualified geotechnical engineer or geologist, licensed in the state of Washington.

3. Areas that have shown movement during the Holocene epoch (from ten thousand years ago to the present) or that are underlain or covered by mass wastage debris of that epoch;

4. Slopes that are parallel or subparallel to planes of weakness (such as bedding planes, joint systems, and fault planes) in subsurface materials;

5. Slopes having gradients steeper than eighty percent (80%) subject to rock fall during seismic shaking;

6. Areas potentially unstable because of rapid stream incision, stream bank erosion, and undercutting by wave action;

7. Areas located in a canyon or on an active alluvial fan, presently or potentially subject to inundation by debris flows or catastrophic flooding; and

8. Any area with a slope of forty percent (40%) or steeper and with a vertical relief of ten (10) or more feet except areas composed of consolidated rock. A slope is delineated by establishing its toe and top and measured by averaging the inclination over at least ten (10) feet of vertical relief.

C. Seismic hazard areas. Seismic hazard areas are areas subject to severe risk of damage as a result of earthquake induced ground shaking, slope failure, settlement, soil liquefaction, lateral spreading, or surface faulting.

D. Other hazard areas. Geologically hazardous areas shall also include areas determined by the director to be susceptible to other geological events including mass wasting, debris flows, rock falls, and differential settlement.

16.90.030 Classification of geologically hazardous areas. All geologic hazard areas should be classified according to the following categories for each geologic hazard type.

Classification	Documentation and Data Sources
Known or Suspected Risk	Documentation or projection of the hazard by a qualified professional exists.
Risk Unknown	Documentation, or projection of the lack of hazard, by a qualified professional exists, or data are not available to determine the presence or absence of a geologic hazard.

16.90.040 Mapping of geologically hazardous areas.

A. The approximate location and extent of geologically hazardous areas are shown on the adopted critical area maps. The adopted critical area maps may include:

1. U.S. Geological Survey landslide hazard, and seismic hazard maps;

2. Department of Natural Resources seismic hazard maps for Western Washington;

3. Department of Natural Resources slope stability maps;

4. Federal Emergency Management Administration flood insurance maps; and

5. Locally adopted maps.

B. These maps are to be used as a guide for the City of Camas, project applicants and/or property owners, and may be continuously updated as new critical areas are identified. They are a reference and do not provide a final critical area designation.

16.90.050 Activities allowed in geologically hazardous areas. The following activities are allowed in geologically hazardous areas, provided that the activity will not increase the risk of the hazard, pursuant to *Allowed activities* under general provisions [Section 16.50.120], and do not require submission of a critical area report:

A. Construction of new buildings with less than 2,500 square feet of floor area or roof area, whichever is greater, and which are not residential structures or used as places of employment or public assembly;

B. Additions to the ground floor of existing single-family residences that are 250 square feet or less; and

C. Installation of fences.

16.90.060 Critical area report requirements for geologically hazardous areas.

A. Prepared by a qualified professional. A critical areas report for a geologically hazardous area shall be prepared by a geotechnical engineer or geologist, licensed in the state of Washington, with experience analyzing geologic, hydrologic, and ground water flow systems.

B. Area addressed in critical area report. The project area and geologically hazardous areas within 300 feet of the proposed activity shall be addressed in a critical area report for geologically hazardous areas.

C. Geotechnical evaluation and assessment. Except as provided for in D and E below, a critical area report for geologically hazardous areas shall first contain an evaluation and, if required, an assessment of geological hazards including site- and proposal-related information at a minimum.

1. Site evaluation. A site evaluation shall include:

   a. Identification of the geologically hazardous area including the type and extent of the geological hazard, and the reason the area is or is not likely to be impacted by the proposed development plan.

   b. A description of the project including, where applicable:
      i. Proposed structures;
      ii. Proposed grading;
      iii. Areas proposed for storage of materials;
      iv. Proposed storm drainage areas;
      v. Related project impacts which have a potential to adversely affect the geological hazard and related impacts to the project from the potentially affected geologically hazardous areas; and
      vi. If available for the proposed activity, a site development plan may be included to illustrate proposed project impacts. The development plan when provided will show the geological hazard area, proposed site improvements, two-foot contours, proposed storm water treatment facilities, proposed or known existing septic drain fields, proposed stockpile areas, or proposed areas of mass grading.

   c. Identification of proportionate and appropriate mitigation measures and a description of how they will adequately protect the proposed development, adjacent developments and the subject geologically hazardous area.

   d. A recommendation based on the proposed site activities of the level of study, construction monitoring, or site design changes which may be needed during the final design process.

2. Geotechnical assessment. If recommended by the site evaluation or as required by a condition of approval, a geotechnical assessment for geologically hazardous areas shall contain include the following site- and proposal-related information at a minimum:

   a. Site plans. The report shall include a copy of the site plans for the proposal showing:

      i. The type and extent of geologic hazard areas, and any other critical areas, and management zones on, adjacent to, within three hundred (300) feet of, or that

are likely to impact the proposal and related impacts to the project from the potentially affected geologically hazardous areas as identified in the site evaluation report or as a condition of approval; and

ii. Proposed development, including the location of existing and proposed structures, fill, storage of materials, and storm drainage facilities, with dimensions indicating distances to hazard areas; and

iii. The topography, in two-foot contours, of the project area and all hazard areas addressed in the report.

3. Assessment of geological characteristics. The report shall include an assessment of the geologic characteristics and engineering properties of the soils, sediments, and/or rock of the project area and potentially affected adjacent properties, and a review of the site history regarding landslides, erosion, and prior grading. Soils analysis shall be accomplished in accordance with accepted taxonomic classification systems in use in the region. The assessment shall include, but not be limited to:

   a. A description of the surface and subsurface geology, hydrology, soils, and vegetation found in the project area and in generally all hazard areas addressed in the report;

   b. A detailed overview of the field investigations, published data and references; data and conclusions from past assessments of the site; and site specific measurements, test, investigations, or studies that support the identification of geologically hazardous areas; and

   c. A description of the vulnerability of the site to seismic and other geologic events;

4. Analysis of proposal. The report shall contain a geotechnical analysis including a detailed description of the project, its relationship to the geologic hazard(s), and its potential impact upon the hazard area, the subject property and affected adjacent properties.

5. Summary and recommendation. The report shall make a recommendation for the minimum no-disturbance management zone or minimum building setback from any geologic hazard, or other appropriate mitigation measures based upon the geotechnical analysis.

D. Incorporation or acceptance of previous study. Where a valid geotechnical report has been prepared within the last five (5) years for a specific site, and where the proposed land use activity and surrounding site conditions are unchanged, said report may be wholly or partially incorporated into or accepted as the required critical area report. The applicant shall submit a geotechnical assessment detailing any changed environmental conditions associated with the site.

E. Where the applicant can demonstrate that the proposed project or activity has no direct impact on or from the identified geologically hazardous area or that the site evaluation requirements above are not applicable to the proposed project or activity, the director may not require additional site assessment work or may limit the scoping of the site evaluation based on identified site specific geologic hazards.

F. Mitigation of long-term impacts. When hazard mitigation is required, the mitigation plan shall specifically address how the activity maintains or reduces the pre-existing level of risk to the

site and adjacent properties on a long-term basis (equal to or exceeding the projected lifespan of the activity or occupation). Proposed mitigation techniques shall be considered to provide long-term hazard reduction only if they do not require regular maintenance or other actions to maintain their function. Mitigation may also be required to avoid any increase in risk above the pre-existing conditions following abandonment of the activity.

16.90.070 Critical area report requirements for specific hazards.

A. Erosion and landslide hazard areas. In addition to the basic geological hazard area report requirements, a report for an erosion hazard or landslide hazard area shall include the following information at a minimum:

1. Site plan. The report shall include a copy of the site plan for the proposal showing:

   a. The height of slope, slope gradient, and cross section of the project area;

   b. The location of springs, seeps, or other surface expressions of ground water on or within three hundred (300) feet of the project area or that have potential to be affected by the proposal; and

   c. The location and description of surface water runoff;

2. Geotechnical analysis. The geotechnical analysis shall specifically include:

   a. A description of the extent and type of vegetative cover;

   b. An estimate of load capacity including surface and ground water conditions, public and private sewage disposal systems, fills and excavations and all structural development;

   c. An estimate of slope stability and the effect construction and placement of structures will have on the slope over the estimated life of the structure;

   d. An estimate of the bluff retreat rate that recognizes and reflects potential catastrophic events such as seismic activity or a one hundred year storm event;

   e. Consideration of the run-out hazard of landslide debris and/or the impacts of landslide run-out on down slope properties.

   f. A study of slope stability including an analysis of proposed angles of cut and fill and site grading;

   g. Recommendations for building limitations, structural foundations, and an estimate of foundation settlement;

   h. An analysis of proposed surface and subsurface drainage, and the vulnerability of the site to erosion;

3. Erosion and sediment control plan. For any development proposal on a site containing an erosion hazard area, an erosion and sediment control plan shall be required. The erosion and sediment control plan shall be prepared in compliance with requirements set forth in CMC 15.32, CMC 17.36 and the *City of Camas Design Standard Manual*;

4. Drainage plan. The report shall include a drainage plan for the collection, transport, treatment, discharge and/or recycle of water prepared in accordance with CMC 17.36 and the *City of Camas Design Standard Manual.*

5. Mitigation plans. Hazard and environmental mitigation plans for erosion and landslide hazard areas shall include the location and methods of drainage, surface water management, locations and methods of erosion control, a vegetation management and/or replanting plan and/or other means for maintaining long term soil stability.

6. Monitoring surface waters. If the director determines that there is a significant risk of damage to downstream waters due to potential erosion from the site, based on the size of the project, the proximity to the receiving waters, or the sensitivity of the receiving waters, the critical area report shall include a plan to monitor the surface water discharge from the site. The monitoring plan shall include a recommended schedule for submitting monitoring reports to the City of Camas.

B. Seismic hazard areas. In addition to the basic report requirements, a critical area report for a seismic hazard area shall also meet the following requirements:

1. The site map shall show all known and mapped faults within three hundred (300) feet of the project area or that have potential to be affected by the proposal.

2. The geotechnical analysis shall include a complete discussion of the potential impacts of seismic activity on the site (for example, forces generated and fault displacement).

C. Other geologically hazardous areas. In addition to the basic report requirements, the director may require additional information to be included in the critical area report when determined to be necessary to the review the proposed activity and the subject hazard. Additional information that may be required, includes, but is not limited to:

1. Site plan. The site plan shall show all known hazard areas located within three hundred (300) feet of the project area or that have potential to be affected by the proposal; and

2. Geotechnical analysis. The geotechnical analysis shall include a complete discussion of the potential impacts of the hazard on the project area and of the proposal on the hazard.

16.90.080 Performance standards – General requirements

Alterations of geologically hazardous areas or associated management zones may only occur for activities that will not adversely impact or pose a threat to adjacent properties or critical areas and are designed so that the hazard to the project is eliminated or mitigated to a level equal to or less than pre-development conditions.

16.90.090 Performance standards – Specific hazards

A. Erosion and landslide hazard areas. Activities on sites containing erosion or landslide hazards shall meet the following requirements:

1. Management zone required. A management zone shall be established from all edges of erosion or landslide hazard areas. The size of the management zone shall be determined by the director to eliminate or minimize the risk of property damage, death or

injury resulting from erosion and landslides caused in whole or part by the development, based upon review of and concurrence with a critical area report prepared by a qualified professional.

a. Management zone established. A management zone shall be established from the edges of areas characterized by steep slopes, potentially unstable soils, erosion potential, or seismic activity. The management zone will be established by a qualified professional and shall adequately protect the proposed development, adjacent developments and subject critical area. The management zone shall generally be equal to the height of the slope or fifty feet (50') whichever is greater. A management zone less than fifty feet (50') may be established if a qualified professional determines that such reduction will adequately protect the proposed development, adjacent developments and subject critical area.

b. Increased management zone. The management zone may be increased where the director determines a larger management zone is necessary to prevent risk of damage to proposed and existing development(s);

2. Design standards. Development under this section shall be designed to meet the following basic requirements. The requirement for long-term slope stability shall exclude designs that require periodic maintenance or other actions to maintain their level of function. The basic development design standards are:

a. The proposed development shall not decrease the factor of safety for landslide occurrences below the limits of 1.5 for static conditions and 1.2 for dynamic conditions. Analysis of dynamic conditions shall be based on a minimum horizontal acceleration as established by the current version of the Uniform Building Code.

b. Structures and improvements shall be clustered to avoid geologically hazardous areas and other critical areas;

c. Structures and improvements should minimize alterations to the natural contour of the slope and foundations shall be tiered where possible to conform to existing topography;

d. Structures and improvements shall be located to preserve the most critical portion of the site and its natural landforms and vegetation;

e. The proposed development shall not result in greater risk or a need for increased management zones on neighboring properties;

f. The use of retaining walls that allow the maintenance of existing natural slope area is preferred over graded artificial slopes;

g. Development shall be designed to minimize impervious lot coverage;

3. Vegetation removal. Within a geologically hazardous area and related management zone, removal of vegetation shall be limited to the following:

a. Selective vegetation removal as provided under CMC 16.50.130; or

b. The City may authorize as part of a critical area review, vegetation removal that has been determined to have no greater adverse impact on the geologically hazardous area and is not necessary for mitigating any other impact under the Camas Municipal Code. The determination of no greater adverse impact will take into consideration a vegetation removal plan prepared by a certified landscape architect or arborist and reviewed by a geotechnical engineer.

4. Seasonal restriction. Clearing and grading under a City permit shall be allowed only from May 1st to October 1st of each year provided that the City of Camas may extend or shorten the dry season on a case-by-case basis depending on actual weather conditions;

5. Utility lines and pipes. Utility lines and pipes shall be permitted in erosion and landslide hazard areas only when the applicant demonstrates that no other practical alternative is likely. The line or pipe shall be appropriately located and designed so that it will continue to function in the event of an underlying failure.

6. Point discharges. Point discharges from surface water facilities and roof drains onto or upstream from an erosion or landslide hazard area shall be prohibited except as follows:

   a. Conveyed via continuous storm pipe downslope to a point where there are no erosion hazards areas downstream from the discharge;

   b. Discharged at flow durations matching predeveloped conditions, with adequate energy dissipation, into existing channels that previously conveyed stormwater runoff in the predeveloped state; or

   c. Dispersed discharge upslope of the steep slope onto a low-gradient undisturbed management zone demonstrated to be adequate to infiltrate all surface and stormwater runoff;

7. Roads and utilities [see subsection (5) of this section] may be permitted within geologic hazard area or management zone if the City of Camas determines that no other reasonable alternative exists, which could avoid or minimize impacts to a greater extent.

B. Seismic hazard areas. Activities proposed to be located in seismic hazard areas shall meet the standards of *Performance standards – General requirements* [Section .080].

C. Other hazard areas. Activities on sites containing or adjacent to geologically hazardous areas, shall meet the standards of *Performance standards – General requirements* [Section .080].

Chapter 16.95 Fish and Wildlife Habitat Conservation Areas

(Reserved)

Appendix A

Threatened, Endangered and Candidate Species

As of October 2001, the combined list of federally and state identified species included:

Federal Status
E = Endangered
T = Threatened
P= Proposed
C= Candidate
SC= Species of concern

State Status
E = Endangered
T = Threatened
C = Candidate
S= Sensitive

COMMON NAME	SCIENTIFIC NAME	STATE STATUS	FEDERAL STATUS	CATEGORY
Brown pelican	*Pelecanus occidentalis*	E	E	Birds
Black right whale	*Balaena glacialis*	E	E	Mammals
Blue whale	*Balaenoptera musculus*	E	E	Mammals
Columbian white-tailed deer	*Odocoileus virginianus leucurus*	E	E	Mammals
Fin whale	*Baleonoptera physalus*	E	E	Mammals
Gray wolf	*Canis lupus*	E	E	Mammals
Humpback whale	*Megaptera novaeangliae*	E	E	Mammals
Sei whale	*Balaenoptera borealis*	E	E	Mammals
Sperm whale	*Physeter macrocephalus*	E	E	Mammals
Woodland caribou	*Rangifer tarandus*	E	E	Mammals
Leatherback sea turtle	*Dermochelys coriacea*	E	E	Reptiles
Bald eagle[4]	*Haliaeetus leucocephalus*	T	T	Birds
Marbled murrelet	*Brachyramphus marmoratus*	T	T	Birds
Snowy plover	*Charadrius alexandrinus*	E	T	Birds
Spotted owl	*Strix occidentalis*	E	T	Birds
Oregon silverspot butterfly	*Speyeria zerene hippolyta*	E	T	Butterflies
Bull trout	*Salvelinus confluentus*	C	T	Fish
Chinook salmon (Lower Columbia)	*Oncorhynchus tshawytscha*	C	T	Fish
Chinook salmon (Puget Sound)	*Oncorhynchus tshawytscha*	C	T	Fish
Chinook salmon (Snake R. Fall)	*Oncorhynchus tshawytscha*	C	T	Fish
Chinook salmon (Snake R. Sp/Su)	*Oncorhynchus tshawytscha*	C	T	Fish
Chum salmon (Hood Canal Su)	*Oncorhynchus keta*	C	T	Fish
Chinook salmon (Upper Columbia Sp)	*Oncorhynchus tshawytscha*	C	E	Fish
Chum salmon (Lower Columbia)	*Oncorhynchus keta*	C	T	Fish
Sockeye salmon (Lake Ozette)	*Oncorhynchus nerka*	C	T	Fish
Sockeye salmon (Snake R.)	*Oncorhynchus nerka*	C	E	Fish
Steelhead (Lower Columbia)	*Oncorhynchus mykiss*	C	T	Fish
Steelhead (Middle Columbia)	*Oncorhynchus mykiss*	C	T	Fish
Steelhead (Upper Columbia)	*Oncorhynchus mykiss*	C	E	Fish
Steelhead (Snake River)	*Oncorhynchus mykiss*	C	T	Fish

[4] Specific protection measures adopted under WAC 232-12-292 apply to bald eagles and related habitat.

COMMON NAME	SCIENTIFIC NAME	STATE STATUS	FEDERAL STATUS	CATEGORY
Grizzly bear	*Ursus arctos*	E	T	Mammals
Lynx	*Lynx canadensis*	T	T	Mammals
Steller sea lion	*Eumetopias jubatus*	T	T	Mammals
Green sea turtle	*Chelonia mydas*	T	T	Reptiles
Loggerhead sea turtle	*Caretta caretta*	T	T	Reptiles
Olive Ridley sea turtle	*Lepidochelys olivacea*		T	Reptiles
Oregon spotted frog	*Rana pretiosa*	E	C	Amphibians
Sage grouse	*Centrocercus urophasianus*	T	C	Birds
Mardon skipper	*Polites mardon*	E	C	Butterflies
Larch mountain salamander	*Plethodon larselli*	S	SC	Amphibians
Aleutian Canada goose	*Branta canadensis leucopareia*	T		Birds
Ferruginous hawk	*Buteo regalis*	T	SC	Birds
Peregrine falcon	*Falco peregrinus*	E	SC	Birds
Sharp-tailed grouse	*Tympanuchus phasianellus*	T	SC	Birds
Margined sculpin	*Cottus marginatus*	S	SC	Fish
Fisher	*Martes pennanti*	E	SC	Mammals
Pygmy rabbit	*Brachylagus idahoensis*	E	E	Mammals
Western gray squirrel	*Sciurus griseus*	T	SC	Mammals
Western pond turtle	*Clemmys marmorata*	E	SC	Reptiles
Northern leopard frog	*Rana pipiens*	E		Amphibians
American white pelican	*Pelecanus erythrorhynchos*	E		Birds
Common loon	*Gavia immer*	S		Birds
Sandhill crane	*Grus canadensis*	E		Birds
Upland sandpiper	*Bartramia longicauda*	E		Birds
Olympic mudminnow	*Novumbra hubbsi*	S		Fish
Pygmy whitefish	*Prosopium coulteri*	S		Fish
Gray whale	*Eschrichtius robustus*	S		Mammals
Sea otter	*Enhydra lutris*	E		Mammals

Appendix B

State Listed Priority Habitats

As of June 15, 1999, the state list of priority habitats included:

Aspen stands
Caves
Cliffs
Estuary and estuary-like areas
Freshwater wetlands and fresh deepwater
Instream habitat
Juniper savannah
Marine/estuarine shorelines
Old-growth/mature forests
Oregon white oak woodlands
Prairies and steppe
Riparian
Rural natural open space
Shrub-steppe
Snags and logs
Talus
Urban natural open space
Vegetated marine/estuarine

Appendix C

Definitions

Words not defined in these provisions shall be as defined in the City of Camas code, the Washington Administrative Code, or the Revised Code of Washington. Words not found in either code shall be as defined in the Webster's Third New International Dictionary, latest edition.

A

Active fault - A fault that is considered likely to undergo renewed movement within a period of concern to humans. Faults are commonly considered to be active if the fault has moved one or more times in the last 10,000 years, but faults may also be considered active in some cases if movement has occurred in the last 500,000 years.

Adaptive management- Adaptive management relies on scientific methods to evaluate how well regulatory and non-regulatory actions protect the critical area. An adaptive management program is a formal and deliberate scientific approach to taking action and obtaining information in the face of uncertainty.

Advance mitigation – Mitigation of an anticipated critical area impact or hazard completed according to an approved critical area report and prior to site development.

Agricultural land - Land primarily devoted to the commercial production of horticultural, viticultural, floricultural, dairy, apiary, vegetable, or animal products or of berries, grain, hay, straw, turf, seed, Christmas trees not subject to the excise tax imposed by RCW 84.33.100 through 84.33.140, or livestock, and or that has been designated as long-term commercial significance for agricultural production.

Alteration - Any human induced change in an existing condition of a critical area or its management zone. Alterations include, but are not limited to grading, filling, channelizing, dredging, clearing (vegetation), construction, compaction, excavation or any other activity that changes the character of the critical area.

Anadromous fish – Fish that spawn and rear in freshwater and mature in the marine environment. While Pacific salmon die after their first spawning, adult char (bull trout) can live for many years, moving in and out of saltwater and spawning each year. The life history of Pacific salmon and char contains critical periods of time when these fish are more susceptible to environmental and physical damage than at other times. The life history of salmon, for example, contains the following stages: upstream migration of adults, spawning, inter-gravel incubation, rearing, smoltification (the time period needed for juveniles to adjust their body functions to live in the marine environment), downstream migration, and ocean rearing to adults.

Applicant - A person who files an application for permit under these provisions and who is either the owner of the land on which that proposed activity would be located, a contract purchaser, or the authorized agent of such a person.

Aquifer – A geological formation, group of formations or part of formation that is capable of yielding a significant amount of water to a well or spring.

Aquifer, confined – 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.

Aquifer recharge areas - Areas that, due to the presence of certain soils, geology, and surface water, act to recharge ground water by percolation.

Aquifer, sole source – 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 fifty percent (50%) or more of the drinking water for an area without a sufficient replacement available.

Aquifer susceptibility – 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.

Aquifer, unconfined – 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."

Area of shallow flooding – An area designated AO, or AH Zone on the flood insurance map(s). The base flood depths range from one to three feet; a clearly defined channel does not exist; the path of flooding is unpredictable and indeterminate; and, velocity flow may be evident. AO is characterized as sheet flow and AH indicates ponding.

B

Base flood - A flood event having a one percent (1%) chance of being equaled or exceeded in any given year, also referred to as the 100-year flood. Designations of base flood areas on flood insurance map(s) always include the letters A or V.

Basement – Any area of the building having its floor below ground level on all sides.

Best available science - Current scientific information used in the process to designate, protect, or restore critical areas, that is derived from a valid scientific process as defined by WAC 365-195-900 through 925. Sources of best available science are included in "Citations of Recommended Sources of Best Available Science for Designating and Protecting Critical Areas" published by the state Office of Community Development.

Best management practices - Conservation practices or systems of practices and management measures that:

A. Control soil loss and reduce water quality degradation caused by high concentrations of nutrients, animal waste, toxics, and sediment;
B. Minimize adverse impacts to surface water and ground water flow, circulation patterns, and to the chemical, physical, and biological characteristics of wetlands;
C. Protect trees and vegetation designated to be retained during and following site construction; and
D. Provide standards for proper use of chemical herbicides within critical areas.

The City of Camas shall monitor the application of best management practices to ensure that the standards and policies of these provisions are adhered to.

Breakaway wall – A wall that is not part of the structural support of the building and is intended through its design and construction to collapse under specific lateral loading forces, without causing damage to the elevated portion of the building or supporting foundation system.

C

Channel migration zone (CMZ) – The lateral extent of likely movement along a stream or river during the next one hundred years as determined by evidence of active stream channel movement over the past one hundred (100) years. Evidence of active movement over the one hundred (100) year time frame can be inferred from aerial photos or from specific channel and valley bottom characteristics. The time span typically represents the time it takes to grow mature trees that can provide functional large woody debris to streams. A CMZ is not typically present if the valley width is generally less than three (2) bankfull widths, is confined by terraces, no current or historical aerial photographic evidence exists of significant channel movement, and there is no field evidence of secondary channels with recent scour from stream flow or progressive bank erosion at meander bends. Areas separated from the active channel by legally existing artificial channel constraints that limit bank erosion and channel avulsion without hydraulic connections shall not be considered within the CMZ.

Compensation project - Actions necessary to replace project-induced critical area and management zone losses, including land acquisition, planning, construction plans, monitoring and contingency actions.

Compensatory mitigation - Replacing project-induced wetland losses or impacts, and includes, but is not limited to, the following:

Restoration - Actions performed to reestablish wetland functional characteristics and processes that have been lost by alterations, activities, or catastrophic events within an area that no longer meets the definition of a wetland.

Creation - Actions performed to intentionally establish a wetland at a site where it did not formerly exist.

Enhancement - Actions performed to improve the condition of existing degraded wetlands so that the functions they provide are of a higher quality.

Preservation- Actions taken to ensure the permanent protection of existing, high-quality wetlands.

Conservation easement – A legal agreement that the property owner enters into to restrict uses of the land. Such restrictions can include, but are not limited to, passive recreation uses such as trails or scientific uses and fences or other barriers to protect habitat. The easement is recorded on a property deed, runs with the land, and is legally binding on all present and future owners of the property, therefore, providing permanent or long-term protection. (Oak Harbor)

Critical aquifer recharge area – Areas designated by WAC 365-190-080(2) that are determined to have a critical recharging effect on aquifers used for potable water as defined by WAC 365-190-030(2).

Critical areas, (or sensitive areas) - Critical areas include any of the following areas or ecosystems: Aquifer recharge areas, fish and wildlife habitat conservation areas, frequently flooded areas, geologically hazardous areas, and wetlands, as defined in RCW 36.70A and these provisions.

Critical area tract - Land held in private ownership and retained in an open condition in perpetuity for the protection of critical areas. Lands within this type of dedication may include but are not limited to, portions and combinations of forest habitats, grasslands, shrub steppe, on-site watersheds, 100-year flood plains, shorelines or shorelines of statewide significance, riparian areas, and wetlands.

Critical facility – A facility for which even a slight chance of flooding, inundation, or impact from a hazard event might be too great. Critical facilities include, but are not limited to, schools, nursing homes, hospitals, police, fire and emergency response installations, and installations that produce, use or store hazardous materials or hazardous waste.

D

Developable area - A site or portion of a site that may be utilized as the location of development, in accordance with the rules of these provisions.

Development - Any activity upon the land consisting of construction or alteration of structures, earth movement, dredging, dumping, grading, filling, mining, removal of any sand, gravel, or minerals, driving of piles, drilling operations, bulkheading, clearing of vegetation, or other land disturbance. Development includes the storage or use of equipment or materials inconsistent with the existing use. Development also includes approvals issued by the City of Camas that binds land to specific patterns of use, including but not limited to, subdivisions, short subdivisions, zone changes, conditional use permits, and binding site plans. Development activity does not include the following activities:

A. Interior building improvements.
B. Exterior structure maintenance activities, including painting and roofing.
C. Routine landscape maintenance of established, ornamental landscaping, such as lawn mowing, pruning and weeding.
D. Maintenance of the following *existing* facilities that does not expand the affected area: septic tanks (routine cleaning); wells; individual utility service connections; and individual cemetery plots in established and approved cemeteries.

Development permit – Any permit issued by the City of Camas, or other authorized agency, for construction, land use, or the alteration of land.

Director – The City of Camas Public Works Director or designee.

E

Elevated building – A building that has no basement and its lowest elevated floor is raised above ground level by foundation walls, shear walls, post, piers, pilings, or columns.

Emergent wetland – A regulated wetland with at least thirty percent (30%) of the surface area covered by erect, rooted, herbaceous vegetation extending above the water surface as the uppermost vegetative strata.

Erosion – The process whereby wind, rain, water, and other natural agents mobilize and transport particles.

Erosion hazard areas – At least those areas identified by the United State Department of Agriculture Soil Conservation Service as have a "severe" rill and inter-rill erosion hazard.

Exotic - Any species of plants or animals, which are foreign to the planning area.

F

Fish and wildlife habitat conservation areas – Areas necessary for maintaining species in suitable habitats within their natural geographic distribution so that isolated subpopulations are not created as designated by WAC 365-190-080(5). These areas include:

A. Areas with which state or federally designated endangered, threatened, and sensitive species have a primary association;
B. Habitats of local importance, including but not limited to areas designated as priority habitat by the Department of Fish and Wildlife;
C. Naturally occurring ponds under twenty acres and their submerged aquatic beds that provide fish or wildlife habitat, including those artificial ponds intentionally created from dry areas in order to mitigate impacts to ponds;
D. Waters of the state, including lakes, rivers, ponds, streams, inland waters, underground waters, salt waters and all other surface waters and watercourses within the jurisdiction of the state of Washington;
E. Lakes, ponds, streams, and rivers planted with game fish by a governmental or tribal entity;
F. State natural area preserves and natural resource conservation areas; and
G. Land essential for preserving connections between habitat blocks and open spaces.

Flood or flooding - A general and temporary condition of partial or complete inundation of normally dry land areas from the overflow of inland waters and/or the unusual and rapid accumulation of runoff of surface waters from any source.

Flood insurance map – The official map on which the Federal Insurance Administration has delineated the areas of special flood hazards and include the risk premium zones applicable to the community. Also known as "flood insurance rate map" or "FIRM."

Flood insurance study – The official report provided by the Federal Insurance Administration that includes flood profiles, the Flood Boundary-Floodway Map, and the water surface elevation of the base flood.

Flood plain - The total land area adjoining a river, stream, watercourse or lake subject to inundation by the base flood.

Flood protection elevation - The elevation that is one (1) foot above the base flood elevation.

Flood resistant material – Materials designed to be resistant to the impacts associated with flooding and defined and described in detail in FEMA Technical Bulletin #2-93, dated April 1993 and FEMA publication FEMA-348, "*Protecting Building Utilities from Flood Damage*."

Floodway - The channel of a river or other watercourse and the adjacent land area that must be reserved in order to discharge the base flood without cumulatively increasing the surface water elevation more that one (1) foot. Also known as the "zero rise floodway."

Forested wetland – A regulated wetland with at least thirty percent (30%) of the surface area covered by woody vegetation greater than twenty (20) feet in height that is at least partially rooted within the wetland.

Formation – An assemblage of earth materials grouped together into a unit that is convenient for description or mapping.

Formation, confining – The relatively impermeable formation immediately overlying a confined aquifer.

Frequently flooded areas – Lands in the flood plain subject to a one percent (1%) or greater chance of flooding in any given year. Frequently flooded areas perform important hydrologic functions and may present a risk to persons and property as designated by WAC 365-190-080(3). Classifications of frequently flooded areas include, at a minimum, the 100-year flood plain designations of the Federal Emergency Management Agency and the National Flood Insurance Program.

Functions and values – The beneficial roles served by critical areas including, but not limited to, water quality protection and enhancement, fish and wildlife habitat, food chain support, flood storage, conveyance and attenuation, ground water recharge and discharge, erosion control, wave attenuation, protection from hazards, historical and archaeological and aesthetic value protection, and recreation. These beneficial roles are not listed in order of priority.

G

Geologically hazardous areas - Areas that may not be suited to development consistent with public health, safety or environmental standards, because of their susceptibility to erosion, sliding, earthquake, or other geological events as designated by WAC 365-190-080(4). Types of geologically hazardous areas include: erosion, landslide, seismic, mine, and volcanic hazards.

Ground water - Water in a saturated zone or stratum beneath the surface of land or a surface water body.

Ground water management area – A specific geographic area or subarea designated pursuant to Chapter 173-100 WAC for which a ground water management program is required.

Ground water management program – 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.

Ground water, perched – Ground water in a saturated zone is separated from the underlying main body of ground water by an unsaturated rock zone.

Growth Management Act - RCW 36.70A,and 36.70B, as amended.

H

Habitat conservation areas – Areas designated as fish and wildlife habitat conservation areas.

Hazard areas – Areas designated as frequently flooded areas or geologically hazardous areas due to potential for erosion, landslide, seismic activity, mine collapse, or other geological condition.

Hazardous substances – Any liquid, solid, gas, or sludge, including any material, substance, product, commodity, or waste, regardless of quantity, that exhibits any of the physical, chemical or biological properties described in WAC 173-303-090 or 173-303-100.

High intensity land use – Land uses which are associated with high levels of human disturbance or substantial habitat impacts including, but not limited to, medium and high density residential (>1 home per 5 acres), multifamily residential, and commercial and industrial land uses.

High quality wetlands – Those wetlands that meet the following criteria:

A. No, or isolated, human alteration of the wetland topography;

B. No human-caused alteration of the hydrology or the wetland appears to have recovered from the alteration;

C. Low cover and frequency of exotic plant species;

D. Relatively little human-related disturbance of the native vegetation, or recovery from past disturbance;

E. If the wetland system is degraded, it still contains a viable and high quality example of a native wetland community; and

F. No known major water quality problems.

Historic condition – Condition of the land, including flora, fauna, soil, topography, and hydrology that existed before the area and vicinity were developed or altered by human activity.

Hydraulic project approval (HPA) – A permit issued by the state Department of Fish and Wildlife for modifications to waters of the state in accordance with Chapter 75.20 RCW.

Hydric soil – A soil that is saturated, flooded or ponded long enough during the growing season to develop anaerobic conditions in the upper part. The presence of hydric soil shall be determined following the methods described in the *Washington State Wetland Identification and Delineation Manual*.

Hydrologic soil groups – 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:

Low runoff potential and a high rate of infiltration potential;

Moderate infiltration potential and a moderate rate of runoff potential;

Slow infiltration potential and a moderate to high rate of runoff potential; and

High runoff potential and very slow infiltration and water transmission rates.

Hydrophytic vegetation – Macrophytic plant life growing in water or on a substrate that is at least periodically deficient in oxygen as a result of excessive water content. The presence of hydrophytic vegetation shall be determined following the methods described in the *Washington State Wetland Identification and Delineation Manual*.

Hyporheic zone – The saturated zone located beneath and adjacent to streams that contains some portion of surface waters, serves as a filter for nutrients, and maintains water quality.

I

Impervious surface – A hard surface area that either prevents or retards the entry of water into the soil mantle as under natural conditions prior to development or that causes water to run off the surface in greater quantities or at an increased rate of flow from the flow present under natural conditions prior to development. Common impervious surfaces include, but are not limited to, roof tops, walkways, patios, driveways, parking lots or storage areas, concrete or asphalt paving, gravel roads, packed earthen materials, and oiled macadam or other surfaces which similarly impede the natural infiltration of stormwater.

In-kind compensation – To replace critical areas with substitute areas whose characteristics and functions closely approximate those destroyed or degraded by a regulated activity. It does not mean replacement "in-category."

Isolated wetlands – Those wetlands that are outside of and not contiguous to any 100-year flood plain of a lake, river, or stream, and have no contiguous hydric soil or hydrophytic vegetation between the wetland and any surface water.

Infiltration – The downward entry of water into the immediate surface of soil.

Injection well(s)

A. **Class I** – A well used to inject industrial, commercial, or municipal waste fluids beneath the lowermost formation containing, within one quarter (1/4) mile of the well bore, an underground source of drinking water.

B. **Class II** – A well used to inject fluids:
   1. Brought to the surface in connection with conventional oil or natural gas exploration or production and may be commingled with wastewaters from gas plants that are an integral part of production operations, unless those waters are classified as dangerous wastes at the time of injection;
   2. For enhanced recovery of oil or natural gas; or
   3. For storage of hydrocarbons that are liquid at standard temperature and pressure.

C. **Class III** – A well used for extraction of minerals, including but not limited to the injection of fluids for:
   1. In-situ production of uranium or other metals that have not been conventionally mined;
   2. Mining of sulfur by Frasch process; or
   3. Solution mining of salts or potash.

D. **Class IV** – A well used to inject dangerous or radioactive waste fluids.

E. **Class V** – All injection wells not included in Classes I, II, III, or IV.

Inter-rill - Inter-rills are areas subject to sheetwash.

J

Joint Aquatic Resource Permits Application (JARPA) – A single application form that may be used to apply for hydraulic project approvals, shoreline management permits, approvals of exceedance of water quality standards, water quality certifications, coast guard bridge permits, Department of Natural Resources use authorization, and Army Corps of Engineers permits.

L

Lahars – Mudflows and debris flows originating from the slopes of a volcano.

Landslide hazard areas – Areas that are potentially subject to risk of mass movement due to a combination of geologic landslide resulting from a combination of geologic, topographic, and hydrologic factors. These areas are typically susceptible to landslides because of a combination of factors including: bedrock, soil, slope gradient, slope aspect, geologic structure, ground water, or other factors.

Low intensity land use – Land uses which are associated with low levels of human disturbance or low habitat impacts, including, but not limited to, passive recreation, open space, or forest management land uses.

Lowest floor – The lowest floor of the lowest enclosed area, including the basement. An unfinished or flood resistant enclosure, usable solely for parking of vehicles, building access or storage, in an area other than a basement area, is not considered a building's lowest floor, provided that such enclosure is not built so as to render the structure in violation of the applicable requirements of these provisions.

M

Management zone or management zone - An area contiguous to and protects a critical area that is required for the continued maintenance, functioning, and/or structural stability of a critical area.

Mitigation - Avoiding, minimizing or compensating for adverse critical areas impacts. Mitigation, in the following order of preference, is:

A. Avoiding the impact altogether by not taking a certain action or parts of an action;
B. Minimizing impacts by limiting the degree or magnitude of the action and its implementation, by using appropriate technology, or by taking affirmative steps, such as project redesign, relocation, or timing, to avoid or reduce impacts;
C. Rectifying the impact to wetlands, critical aquifer recharge areas, and habitat conservation areas by repairing, rehabilitating or restoring the affected environment to the conditions existing at the time of the initiation of the project;
D. Minimizing or eliminating the hazard by restoring or stabilizing the hazard area through engineered or other methods;
E. Reducing or eliminating the impact or hazard over time by preservation and maintenance operations during the life of the action;
F. Compensating for the impact to wetlands, critical aquifer recharge areas, and habitat conservation areas by replacing, enhancing, or providing substitute resources or environments; and

G. Monitoring the hazard or other required mitigation and taking remedial action when necessary.

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

Moderate intensity land use – Land uses which are associated with moderate levels of human disturbance or substantial habitat impacts including, but not limited to, low density residential (≤ 1 home per 5 acres), active recreation, and agricultural land uses.

Monitoring - Evaluating the impacts of development proposals on the biological, hydrological, and geological elements of such systems and assessing the performance of required mitigation measures throughout the collection and analysis of data by various methods for the purpose of understanding and documenting changes in natural ecosystems and features, and includes gathering baseline data.

N

Native vegetation - Plant species that are indigenous to the area in question.

Native growth protection area – An area where native vegetation is preserved for the purpose of preventing harm to property and the environment, including, but not limited to, controlling surface water runoff and erosion, maintaining slope stability, management zones and protecting plants and animal habitat;

Non-conformity – A legally established existing use or legally constructed structure that is not in compliance with current regulations.

Non-indigenous – See "exotic."

O

Off-site compensation – To replace critical areas away from the site on which a critical area has been impacted.

On-site compensation – To replace critical areas at or adjacent to the site on which a critical areas has been impacted.

Ordinary high water mark (OHM) - That mark which is found by examining the bed and banks and ascertaining where the presence and action of waters are so common and usual, and so long continued in all ordinary years, that the soil has a character distinct from that of the abutting upland in respect to vegetation.

Out-of-kind compensation – To replace critical areas with substitute critical areas whose characteristics do not closely approximate those destroyed or degraded. It does not refer to replacement "out-of-category."

P

Perched ground water – See "Ground water, perched."

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

Porous soil types - Soils, as identified by the National Resources Conservation Service, U.S. Department of Agriculture, that contain voids, pores, interstices or other openings which allow the passing of water.

Potable water – Water that is safe and palatable for human use.

Practical alternative – An alternative that is available and capable of being carried out after taking into consideration, cost, existing technology, and logistics in light of overall project purposes, and having less impacts to critical areas.

Priority habitat - Habitat type or elements with unique or significant value to one or more species as classified by the Department of Fish and Wildlife. A priority habitat may consist of a unique vegetation type or dominant plant species, a described successional stage, or a specific structural element.
(WAC 173-26-020(34))

Project area – All areas within fifty (50) feet of the area proposed to be disturbed, altered, or used by the proposed activity or the construction of any proposed structures.

Q

Qualified professional – *A* person with experience and training in the applicable critical area. A qualified professional must have obtained a B.S. or B.A. or equivalent degree in biology, engineering, environmental studies, fisheries, geomorphology or related field, and three years of related work experience.

A. A qualified professional for habitats or wetlands must have a degree in biology and professional experience related to the subject species.
B. A qualified professional for a geological hazard must be a professional engineer or geologist, licensed in the state of Washington.
C. A qualified professional for critical aquifer recharge areas means a hydrogeologist, geologist, engineer, or other scientist with experience in preparing hydrogeologic assessments.

R

Recharge – The process involved in the absorption and addition of water to ground water.

Reclaimed water – Municipal wastewater effluent that has been adequately and reliability treated so that it is suitable for beneficial use. Following treatment it is no longer considered wastewater (treatment levels and water quality requirements are given in the water reclamation and reuse standards adopted by the state Departments of Ecology and Health).

Repair or maintenance - An activity that restores the character, scope, size, and design of a serviceable area, structure, or land use to its previously authorized and undamaged condition. Activities that change the character, size, or scope of a project beyond the original design and drain, dredge, fill, flood, or otherwise alter critical areas are not included in this definition.

Restoration – Measures taken to restore an altered or damaged natural feature including:

A. Active steps taken to restore damaged wetlands, streams, protected habitat, or their management zones to the functioning condition that existed prior to an unauthorized alteration; and
B. Actions performed to reestablish structural and functional characteristics of the critical area that have been lost by alteration, past management activities, or catastrophic events.

Rills - Steep-sided channels resulting from accelerated erosion. A rill is generally a few inches deep and not wide enough to be an obstacle to farm machinery. Rill erosion tends to occur on slopes, particularly steep slopes with poor vegetative cover.

Riparian habitat - Areas adjacent to aquatic systems with flowing water that contain elements of both aquatic and terrestrial ecosystems that mutually influence each other. The width of these areas extends to that portion of the terrestrial landscape that directly influences the aquatic ecosystem by providing shade, fine or large woody material, nutrients, organic and inorganic debris, terrestrial insects, or habitat for riparian-associated wildlife. Widths shall be measured from the ordinary high water mark or from the top of bank if the ordinary high water mark cannot be identified. It includes the entire extent of the flood plain and the extent of vegetation adapted to wet conditions as well as adjacent upland plant communities that directly influence the stream system. Riparian habitat areas include those riparian areas severely altered or damaged due to human development activities.

S

Scientific process – A valid scientific process is one that produces reliable information useful in understanding the consequences of a decision. The characteristics of a valid scientific process are as follows:
A. **Peer review.** The information has been critically reviewed by other qualified scientific experts in that scientific discipline.
B. **Methods.** The methods that were used are standardized in the pertinent scientific discipline or the methods have been appropriately peer-reviewed to assure their reliability and validity.
C. **Logical conclusions and reasonable inferences.** The conclusions presented are based on reasonable assumptions supported by other studies and are logically and reasonably derived from the assumptions and supported by the data presented.
D. **Quantitative analysis.** The data have been analyzed using appropriate statistical or quantitative methods.
E. **Context.** The assumptions, analytical techniques, data, and conclusions are appropriately framed with respect to the prevailing body of pertinent scientific knowledge.
F. **References.** The assumptions, techniques, and conclusions are well referenced with citations to pertinent existing information.

Scrub-shrub wetland – A regulated wetland with at least thirty percent (30%) of its surface area covered by woody vegetation less than twenty (20) feet in height as the uppermost strata.

Section 404 Permit – A permit issued by the Corps of Engineers for the placement of dredge or fill material or clearing in waters of the U.S., including wetlands, in accordance with 33 USC § 1344. Section 404 permits may also be for endangered species consultation.
Require a consultation under Section 7 of the Federal Endangered Species Act *(note: check the appropriate reference for this)*.

Seeps - A spot where water oozes from the earth, often forming the source of a small stream.

Seismic hazard areas – Areas that are subject to severe risk of damage as a result of earthquake-induced ground shaking, slope failure, settlement, or soil liquefaction.

Serviceable - Presently usable.

Significant portion of its range - That portion of a species range likely to be essential to the long-term survival of the population in Washington.

Soil survey – The most recent soil survey for the local area or county by the National Resources Conservation Service, U.S. Department of Agriculture.

Special flood hazard areas – The land in the flood plain within an area subject to a one percent (1%) or greater chance of flooding in any given year. Designations of special flood hazard areas on flood insurance map(s) always include the letters A or V.

Special protection areas – Aquifer recharge areas defined by WAC 173-200-090 that require special consideration or increased protection because of unique characteristics, including, but not limited to:

A. Ground waters that support an ecological system requiring more stringent criteria than drinking water standards;
B. Ground water recharge areas and wellhead protection areas, that are vulnerable to pollution because of hydrogeologic characteristics; and
C. Sole source aquifer status.

Sole source aquifer – See "aquifer, sole source."

Species - Any group of animals classified as a species or subspecies as commonly accepted by the scientific community.

Species, endangered - Any fish or wildlife species that is threatened with extinction throughout all or a significant portion of its range and is listed by the state or federal government as an endangered species.

Species of local importance – Those species of local concern due to their population status or their sensitivity to habitat manipulation, or that are game species.

Species, priority - Any fish or wildlife species requiring protective measures and/or management guidelines to ensure their persistence as genetically viable population levels as classified by the Department of Fish and Wildlife, including endangered, threatened, sensitive, candidate and monitor species, and those of recreational, commercial, or tribal importance.

Species, threatened - Any fish or wildlife species that is likely to become an endangered species within the foreseeable future throughout a significant portion of its range without cooperative management or removal of threats, and is listed by the state or federal government as a threatened species.

Storage tank – Any device, whether stationary or mobile, designed to contain an accumulation of regulated substances and constructed of nonearthen materials (e.g. concrete, steel, plastic) that provides structural support.

Stream – Water contained within a channel, either perennial or intermittent, and classified according to WAC 222-16-030 and as listed under water typing system. Streams also include natural watercourses modified by man. Streams do not include irrigation ditches, waste ways, drains, outfalls, operational spillways, channels, storm water runoff facilities or other wholly artificial watercourses, except those that directly result from the modification to a natural watercourse.

Sub-drainage basin or ***subbasin*** - The drainage area of the highest order stream containing the subject property impact area. Stream order is the term used to define the position of a stream in the hierarchy of tributaries in the watershed. The smallest streams are the highest order (first order) tributaries. These are the upper watershed streams and have no tributaries of their own. When three first order streams meet, they form a second order stream, and when three second order streams meet they become a third order stream, and so on.

Substantial damage – Damage of any origin sustained by a structure whereby the cost of restoring the structure to its before damaged condition would equal or exceed fifty percent (50%) of the market value of the structure before the damage occurred.

Substantial improvement – Any repair, reconstruction, or improvement of a structure, the cost of which equals or exceeds fifty percent (50%) of the market value of the structure either: Before the improvement or repair is started; or if the structure has been damaged and is being restored, before the damage occurred.

V

Vulnerability – The combined effect of susceptibility to contamination and the presence of potential contaminants.

W

Water dependent – A structure or use that cannot exist in any other location and is dependent on the water by reason of the intrinsic nature of its operations. A use that can be carried out only on, in or adjacent to water because the use requires access to the water body for waterborne transportation, recreation, energy production or source of water.

Water table – 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.

Water table aquifer – see "Aquifer, unconfined."

Water Typing System - Waters classified according to WAC 222-16-031 as follows:

A. **Type 1 Water** - All waters, within their ordinary high water mark, as inventoried as "shorelines of the state" under Chapter 90.58 RCW and the rule promulgated pursuant to Chapter 90.58 RCW, but not including waters' associated wetlands as defined in Chapter 90.58 RCW.

B. **Type 2 Water** - Segments of natural waters that are not classified as Type 1 water and have a high fish, wildlife, or human use. These are segments of natural waters and periodically inundated areas of their associated wetlands, which:

1. Are used by substantial numbers of anadromous or resident game fish for spawning, rearing or migration. Waters having the following characteristics are presumed to have highly significant fish population:
   a. Stream segments having a defined channel 20 feet or greater in width between the ordinary high water mark and having a gradient of less than 4 percent.
   b. Lakes, ponds or impoundments having a surface area of 1 acre or greater at seasonal low water.
2. Are used by salmonids for off-channel habitat. These areas are critical to the maintenance of optimum survival of juvenile salmonids. This habitat shall be identified based on the following criteria:
   a. The site must be connected to a stream bearing salmonid and accessible during some period of the year; and
   b. The off-channel water must be accessible to juvenile salmonids through a drainage channel with less than a 5% gradient.

C. **Type 3 Water** - Segments of natural waters that are not classified as Type 1 or 2 waters and have a moderate to slight fish, wildlife and human use. These are segments of natural waters and periodically inundated areas of their associated wetlands which:
   1. Are used by significant numbers of anadromous fish for spawning, rearing or migration. Waters having the following characteristics are presumed to have significant anadromous fish use:
      a. Streams segments having a defined channel of 5 feet or greater in width between the ordinary high water marks; and having a gradient of less than 12 percent and not upstream of a falls of more than 10 vertical feet.
      b. Ponds or impoundments having a surface area of less than 1 acre a seasonal low water and having an outlet to an anadromous fish steam.
   2. Are used by significant numbers of resident game fish. Waters with the following characteristics are presumed to have significant resident game fish use:
      a. Stream segments having a defined channel of 10 feet or greater in width between the ordinary high water marks; and a summer low flow greater than 0.3 cubic feet per second; and a gradient of less than 12 percent.
      b. Ponds or impoundments having a surface area greater than 0.5 acres a seasonal low water.
   3. Are highly significant for the protection of down stream water quality. Tributaries which contribute greater than 20 percent of the flow to a Type 1 or 2 Water are presumed to be significant for 1,500 feet from their confluence with the Type 1 or 2 Water or until their drainage area is less than 50 percent of their drainage area at the point of confluence, whichever is less.

D. **Type 4 Water** - This classification shall be applied to segments of natural waters which are not classified as Type 1,2 or 3, and for the purpose of protecting water quality downstream are classified as Type 4 Water upstream until the channel width becomes less than 2 feet in width between the ordinary high water marks. Their significance lies in their influence on water quality downstream in Type 1,2 and 3 waters. These may be perennial or intermittent.

E. **Type 5 Water** - This classification shall be applied to all natural waters not classified as Type 1,2,3 or 4; including streams with or without well defined channels, areas of perennial or intermittent seepage, ponds, natural sinks and drainage ways having short periods of spring or storm runoff.

Well – A bored, drilled or driven shaft, or a dug hole whose depth is greater that the largest surface dimension for the purpose of withdrawing or injecting water or other liquids.

Wellhead protection area (WHPA) – The portion of a zone of contribution for a well, wellfield or spring, as defined using criteria established by the state Department of Ecology.

Wetlands – Those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs and similar areas. Wetlands 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, or those wetlands created after July 1, 1990, that were unintentionally created as a result of the construction of a road, street, or highway. Wetlands may include those artificial wetlands intentionally created from non-wetland areas to mitigate the conversion of wetlands. For identifying and delineating a regulated wetland, local government shall use the Washington State Wetland Identification and Delineation Manual.

Wetland classes, classes of wetlands, or wetland types – The descriptive classes of the wetlands taxonomic classification system of the U.S. fish and wildlife service (Cowardin, et al 1979).

Wetland edge – The boundary of a wetland as delineated based on the definitions contained in these provisions.

Z

Zone of contribution – The area surrounding a well or spring that encompasses all areas or features that supply ground water recharge to the well or spring.