Chapter 16.55 CRITICAL AQUIFER RECHARGE AREAS

Sections:
16.55.010 Critical aquifer recharge areas designation.
16.55.020 Aquifer recharge area susceptibility ratings.
16.55.030 Mapping of critical aquifer recharge areas.
16.55.040 Activities allowed in critical aquifer recharge areas.
16.55.050 Critical area report--Requirements for critical aquifer recharge areas.
16.55.060 Performance standards--General requirements.
16.55.070 Performance standards--Specific uses.
16.55.080 Uses prohibited from critical aquifer recharge areas.

16.55.010 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-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 Drinking Water 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 Chapter 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.
(Ord. 2517 § 1 (Exh. A (part)), 2008)

16.55.020 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.
(Ord. 2517 § 1 (Exh. A (part)), 2008)
16.55.030 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, 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.
(Ord. 2517 § 1 (Exh. A (part)), 2008)

16.55.040 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 16.51.120), and do not require submission of a critical area report:
A. Construction of structures and improvements, including additions, resulting in less than five percent or two thousand five hundred 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 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 forty percent of the total pervious surface of the site.
(Ord. 2517 § 1 (Exh. A (part)), 2008)

16.55.050 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 hydrogeological assessment.
A Level One hydrogeologic assessment shall be required for any of the following proposed activities:
1. Activities that result in five percent or more, or two thousand five hundred 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 one thousand three hundred feet of the project area;
4. Location of other critical areas, including surface waters, within one thousand three hundred 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-year period;
2. Ground water monitoring plan provisions;
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.

(Ord. 2517 § 1 (Exh. A (part)), 2008)

16.55.060 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.
(Ord. 2517 § 1 (Exh. A (part)), 2008)

16.55.070 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. This applies to 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(9); and
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

TABLE INSET:

<table>
<thead>
<tr>
<th>Activity</th>
<th>Statute--Regulation--Guidance*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aboveground storage tanks</td>
<td>Chapter 173-303-640 WAC</td>
</tr>
<tr>
<td>Animal feedlots</td>
<td>Chapter 173-216 -240 WAC, Chapter 173-220 (NPDES) WAC</td>
</tr>
<tr>
<td>Below ground storage tanks</td>
<td>Chapter 173-360 WAC</td>
</tr>
<tr>
<td>Chemical treatment storage and disposal</td>
<td>Chapter 173-303 WAC</td>
</tr>
<tr>
<td>facilities</td>
<td></td>
</tr>
<tr>
<td>--------------------------------------------------------------------------</td>
<td>------------------------------------------------------------------</td>
</tr>
<tr>
<td>Hazardous waste generator (boat repair shops, biological research facility, dry cleaners, furniture stripping, motor vehicle service garages, photographic processing, printing and publishing shops, etc.)</td>
<td>Chapter 173-303 WAC</td>
</tr>
<tr>
<td>Injection wells</td>
<td>Federal 40 CFR Parts 144 and 146, Chapter 173-218 WAC</td>
</tr>
<tr>
<td>Junk yards and salvage yards</td>
<td>Chapter 173-304 WAC, Best Management Practices to Prevent Stormwater Pollution at Vehicles Recycler Facilities (WDOE 94-146)</td>
</tr>
<tr>
<td>Oil and gas drilling</td>
<td>Chapter 332-12-450 WAC, Chapter 344-12 WAC</td>
</tr>
<tr>
<td>On-site sewage systems (large scale)</td>
<td>Chapter 173-240 WAC</td>
</tr>
<tr>
<td>On-site sewage systems (&lt;14,500 gal/day)</td>
<td>Chapter 246-272 WAC, Local Health Ordinances</td>
</tr>
<tr>
<td>Pesticide storage and use</td>
<td>Chapter 15.54 RCW, Chapter 17.21 RCW</td>
</tr>
<tr>
<td>Solid waste handling and recycling facilities</td>
<td>Chapter 173-304 WAC</td>
</tr>
<tr>
<td>Surface mining</td>
<td>Chapter 332-18 WAC</td>
</tr>
</tbody>
</table>

* as amended.
(Ord. 2517 § 1 (Exh. A (part)), 2008)

16.55.080 Uses prohibited from critical aquifer recharge areas.
The following activities and uses are prohibited in critical aquifer recharge areas:*
A. Landfills. Landfills, including hazardous or dangerous waste, municipal solid waste, special waste, wood waste, and inert and demolition waste landfills;
B. Underground Injection Wells. Classes 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;
C. Mining.
1. Metals and hard rock mining, and
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 man-made);
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; and
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,
3. Activities that are not connected to an available sanitary sewer system are prohibited from critical aquifer recharge areas associated with sole source aquifers, and
4. Underground storage tanks for the use and storage of hazardous substances or hazardous materials.
(Ord. 2517 § 1 (Exh. A (part)), 2008)