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## SUBTITLE 40.4

### CRITICAL AREAS AND SHORELINES

#### 40.410 CRITICAL AQUIFER RECHARGE AREAS (CARAs)

##### 40.410.010 Introduction

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###### A. Purpose.

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This chapter is intended to protect public health, safety, and welfare by preventing degradation, and where possible, enhance the quality and quantity of groundwater which will be, or might likely be, used in the future for drinking water or business purposes. This will be accomplished by limiting potential contaminants within designated critical aquifer recharge areas (CARAs). The requirements of this chapter are intended to fulfill obligations of state law under the Growth Management Act, Chapter [36.70A](#) RCW; the Public Water Systems Penalties and Compliance, Chapter [70.119A](#) RCW; the Washington State Wellhead Protection Program and the Public Water Supplies, Chapter [246-290](#) WAC; the Dangerous Waste Regulations, Chapter [173-303](#) WAC; the Water Quality Standards for Groundwater of the State of Washington, Chapter [173-200](#) WAC; the Underground Injection Control Program, Chapter [173-218](#) WAC; and the Regulation of Public Ground Waters, Chapter [90.48](#) RCW.

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(Amended: Ord. 2005-04-15; Ord. 2018-01-03)

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###### B. Applicability and Exemptions.

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1. Applicability. This chapter applies to all critical aquifer recharge areas as defined in Section [40.410.010](#)(C). Parcels that are partly within Category I and Category II shall be subject to the Category I provisions in this chapter. Parcels that are partly inside Category II, but outside Category I, shall be subject to the Category II provisions in this chapter. Where pre-applications are required for projects, applicants are encouraged to use the pre-application process for pre-screening CARA exemptions.
  2. Exempt Activities and uses. The following activities and uses do not require a CARA permit:
    - a. Existing activities that currently and legally existed on July 31, 1997;
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**Comment [HD1]:** Added, as typically there is very little assessment of whether CARA exemptions apply in the pre-application conference summary report and applicants are sometimes notified during the fully permit process that a CARA permit is required.

**Deleted:** this

**Comment [EG2]:** Is it an activity and/or use?

**Comment [CM3]:** This depends on the definitions in CCC

- b. All residential uses other than those having activities covered by Section [40.410.020\(A\)](#);
- c. Group A public water system source development and associated infrastructure;
- d. Public water supply aquifer storage and recovery (ASR) facilities;
- e. Public water pipelines;
- f. Public water supply storage structures;
- g. Other uses not listed in Sections [40.410.020\(A\)](#), (B) or (C); and
- h. Activities already permitted and regulated by the state or the Clark County Health Department to incorporate best management practices.

**Deleted:** and

**Deleted:** Examples of this include but are not limited to Washington State Department of Ecology review of sewer treatment plants and associated facilities.

Any uses where containment is provided and approved by the Clark County building and fire departments.

3. The following underground storage tank (UST) systems and facilities, including any piping connected thereto, are exempt from the requirements of this chapter:

**Comment [EG4]:** Is this the right section for the Storm UIC exemption?

**Comment [CM5]:** I think where Don suggested it below would be appropriate.

- a. Any UST system holding hazardous wastes subject to Subtitle C of the Federal Solid Waste Disposal Act, or a mixture of such hazardous waste and other regulated substances;
- b. Any wastewater treatment tank system that is part of a wastewater treatment facility regulated under Section 402 or 307(b) of the Clean Water Act;
- c. Equipment or machinery that contains regulated substances for operational purposes such as hydraulic lift tanks and electrical equipment tanks;
- d. Any UST system whose capacity is one hundred ten (110) gallons or less;
- e. Any UST system that contains a de minimis concentration of regulated substances;

- f. Any emergency spill or overflow containment UST system that is expeditiously emptied after use;
- g. Farm or residential UST systems of one thousand one hundred (1,100) gallons or less capacity used for storing motor fuel for noncommercial purposes (i.e., not for resale);
- h. UST systems used for storing heating oil for consumptive use on the premises where stored; except that such systems which store in excess of one thousand one hundred (1,100) gallons are subject to the release reporting requirements of WAC [173-360-372](#);
- i. Septic tanks;
- j. Any pipeline facility (including gathering lines) regulated under:

(1) The Natural Gas Pipeline Safety Act of 1968 (49 U.S.C. App. 1671, et seq.), or

(2) The Hazardous Liquid Pipeline Safety Act of 1979 (49 U.S.C. App. 2001, et seq.), or

(3) Which is a pipeline facility regulated under state laws comparable to the provisions of the law referred to in Section [40.410.010\(B\)\(3\)\(j\)\(1\)](#) or (2) of this definition;

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**Comment [CM6]:** This feels excessively broad to me. If the intent is to cover stormwater conveyance, then we should say that.

k. Surface impoundments, pits, ponds, or lagoons;

**Deleted:** Other pipelines where pre-treatment is reviewed and approved by regulatory agencies.

l. Stormwater or wastewater collection systems;

**Comment [HD7]:** Eric and Chad, if you have better or more text, please provide.

Class five injection wells for stormwater infiltration meeting current stormwater code requirements, subject to Clark County review and approval.

**Comment [CM8]:** For wellhead protection, we need to keep restrictions in place for facilities that contain pollutants for which we don't treat. Vehicle maintenance is mentioned earlier. Essentially, we'd need to cover any on site chemical uses that could migrate through the treatment systems to groundwater not covered by Basic Treatment in SMMWW.

m. Flow-through process tanks;

**Deleted:** projects

n. Liquid traps or associated gathering lines directly related to oil or gas production and gathering operations; or

- o. Storage tanks situated in an underground area (such as a basement, cellar, vault, mineworking drift, shaft, or tunnel) if the storage tank is situated upon or above the surface of the floor.

**Deleted:** Large quantity generators (dangerous, acutely hazardous, and toxic extremely hazardous waste), with containment review and approval by the Clark County building and fire department.¶

(Amended: Ord. 2005-04-15; Ord. 2018-01-03)

C. Definitions.

For the purposes of this chapter, the following definitions shall apply:

Category I CARA	"Category I CARA" means the highest priority critical aquifer recharge area, represented by the one-year time-of-travel for Group A water wells.
Category II CARA	"Category II CARA: means the primary critical aquifer recharge area, represented by the ten (10) year time-of-travel for Group A water wells. This area also consists of the unconsolidated sedimentary aquifer and the Troutdale gravel aquifer.

(Amended: Ord. 2005-04-15; Ord. 2018-01-03)

D. Map.

The map entitled Clark County, Washington Critical Aquifer Recharge Areas is adopted in the twenty (20) year Clark County Comprehensive Growth Management Plan as best available science. If a conflict exists between the map and on-site conditions, the on-site conditions shall supersede the map. The county will update the CARA map as warranted by new information. GIS Map Store produces maps for free in the following link: [Critical Areas Ordinances Maps](#).

(Amended: Ord. 2005-04-15; Ord. 2009-03-02; Ord. 2018-01-03)

**40.410.020 Standards**

A. Activities requiring a CARA permit in Categories I and II include the following:

1. Above- and below-ground storage tanks (tanks and pipes used to contain an accumulation of regulated substances; Unless containment is approved by the Clark County building and fire department.

**Deleted:** (see Section 40.100.070))

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**Comment [EG9]:** Does this need to be added to avoid conflict with the exemption added above? Or maybe added to exemptions? Perhaps split out below ground? Harder to contain?

**Comment [CM10]:** The containment needs to be in place regardless of above- or below-ground. I agree that containment reviewed and approved by Clark County (Development Engineering rather than building? Who has jurisdiction on a generator fuel tank?) should be sufficient to address CARA concerns.

2. Facilities that conduct biological research;
3. Boat repair shops;
4. Chemical research facilities;
5. Dry cleaners;
6. Gasoline service stations;
7. Pipelines; not otherwise exempted from this chapter.
8. Printing and publishing shops (that use printing liquids);
9. Below-ground transformers and capacitors;
10. Sawmills (producing over ten thousand (10,000) board feet per day);
11. Solid waste handling and processing;
12. Vehicle repair, recycling, and recyclable materials – automotive;
13. Funeral services;
14. Furniture stripping;
15. Motor vehicle service garages (both private and government);
16. Photographic processing;
17. Chemical manufacture and reprocessing;
18. Creosote and asphalt manufacture and treatment;
19. Petroleum and petroleum products refining, including reprocessing;
20. Wood products preserving;
21. Golf course;
22. Regulated waste treatment, storage, disposal facilities that handle hazardous material;
23. Uses that generate a medium or large quantity of dangerous, acutely hazardous, and toxic extremely hazardous waste, as defined by WAC Chapter 173-303.

**Comment [HD11]:** Should either remove as just noting Pipelines is very confusing as to what this means or make clear where regulated. I have added another exemption for pipelines in exemption section.

**Comment [EG12]:** Does this belong here?

**Comment [EG13]:** Regardless, we need to change the name to make it more clear.

**Deleted:** Medium quantity generators

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**Comment [EG14]:** Should we update this in the same fashion as Large quantity Generators?

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**Deleted:** ; and

24.

(Amended: Ord. 2005-04-15; Ord. 2018-01-03)

B. Prohibited Activities in Category I.

The following activities are considered high-impact uses due to the probability and/or potential magnitude of their adverse effects on groundwater. These activities are prohibited in Category I, and require a CARA permit for Category II:

1. Landfills;
2. Class V injection wells with the exception of wells for stormwater infiltration meeting current stormwater code requirements, subject to Clark County review and approval.
3. Agricultural drainage wells;
4. Untreated sewage waste disposal wells;
5. Cesspools;
6. Industrial process water and disposal wells;
7. Radioactive waste disposal;
8. Radioactive disposal sites;
9. Surface mining operations; and
10. Electroplating activities.

(Amended: Ord. 2005-04-15; Ord. 2018-01-03)

C. Additional Standards.

The following additional standards apply in all CARAs:

1. Pesticides, herbicides and fertilizers shall be applied in accordance with federal law.
2. Vehicle repair and servicing.

**Comment [HD15]:** Moved to exemption section with provisions.

**Deleted:** Large quantity generators (dangerous, acutely hazardous, and toxic extremely hazardous waste

**Deleted:** ).

**Comment [HD16]:** Recommend moving to the exemption section for stormwater infiltration projects subject to Clark County review and approval. It may be important to regulate certain other types of injection wells, Eric and Chad, please provide your thoughts.

**Comment [EG17]:** What about non stormwater Class V injection wells? Perhaps clarify and reference the exemption instead.

**Deleted:** Class V injection wells

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- a. Vehicle repair and servicing must be conducted over impermeable pads and within a covered structure capable of withstanding normally expected weather conditions. Chemicals used in the process of vehicle repair and servicing must be stored in a manner that protects them from weather and provides containment if leaks occur.
  - b. No Class V stormwater infiltration wells are allowed in CARAs on sites for vehicle repair and servicing. Unless oil water separator is installed. Dry wells on the site prior to the facility establishment must be abandoned using techniques approved by the Department of Ecology or an oil water separator will need to be installed prior to commencement of the proposed facility.

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Deleted: shall be

Comment [SG18]: Per 6/26 meeting, this needs more research/discussion.

Comment [CM19]: I don't agree with the edits here. This is too broad and renders the section inadequate from a wellhead protection perspective. Oils are only ONE of several potential contaminants (antifreeze and other fluids) that need to be addressed. I don't have time right now to look at SMMWW requirements for these facilities, but dead-end sumps are one possibility. We shouldn't be exempting these facilities from a permit, IMHO.

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(Amended: Ord. 2004-06-11; Ord. 2005-04-15; Ord. 2018-01-03)

#### 40.410.030 Administration

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##### A. Permit Requirements.

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1. To receive a CARA permit required by Section [40.410.020](#), the applicant must demonstrate, through a Level 1 site evaluation report, how they will integrate necessary and appropriate best management practices (BMPs) to prevent degradation of groundwater. The applicant must also meet existing local, state, and federal laws and regulations.
  2. If an applicant wants to avoid implementation of the standard, they must submit a Level 2 site evaluation report and develop and implement a monitoring program that:
    - a. Demonstrates how the applicant will prevent degradation to groundwater. The applicant must also meet existing local, state and federal laws and regulation; and
    - b. Includes quarterly reporting to the department. The department will evaluate the monitoring program and may require periodic changes based on the monitoring results, new technology, and/or BMPs.
  3. Applicants that agree to implement all relevant BMPs are exempt from preparing a site evaluation report. Applicants will demonstrate how the implementation of BMPs will be used to prevent degradation to groundwater and will submit quarterly monitoring reports to the department.

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(Amended: Ord. 2005-04-15; Ord. 2018-01-03; Ord. 2018-01-09)

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B. Level 1 Site Evaluation Report/Approval Criteria.

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1. For all proposed activities to be located in a critical aquifer recharge area, the site evaluation report shall include a Level 1 assessment by an engineer as defined in Section [40.386.010](#). The report will identify appropriate BMPs and show how they will prevent degradation of groundwater. Examples of pollution source controls are described in the [Building Code, Fire Code, Clark County Stormwater Manual](#) and Chapter [173-218](#) WAC, Underground Injection Control Program.
2. The report will identify how the applicant will follow the requirements of Chapter [90.48](#) RCW (Water Pollution Control), Chapter [70.105D](#) RCW (Model Toxics Control Act), Chapter [173-340](#) WAC, and the Dangerous Waste Regulations, Chapter [173-303](#) WAC, in the event hazardous material is released onto the ground or into groundwater.
3. The report will be reviewed by the department, in consultation with the Clark County Health Department and the local water purveyor, in conjunction with the same process as the primary development permit. If approved, the applicant will receive a CARA permit allowing the activity on the subject property.

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(Amended: Ord. 2005-04-15; Ord. 2018-01-03; Ord. 2018-01-09)

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C. Level 2 Site Evaluation Report/Approval Criteria.

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1. A qualified groundwater professional as defined in Section [40.100.070](#) will determine whether the proposed activity will have any adverse impacts on groundwater in CARAs. This determination must be based upon the requirements of the Safe Drinking Water Act and the Wellhead Protection Area Program, Public Water Supplies, Chapter [246-290](#) WAC; Groundwater Quality Standards for the State of Washington, Chapter [173-200](#) WAC; and Dangerous Waste Regulations, Chapter [173-303](#) WAC. By this reference, Chapters [173-200](#), [173-218](#), [173-303](#), and [246-290](#) WAC, as written and hereafter updated, will be part of this chapter.
2. The Level 2 site evaluation report will include the following:
  - a. Identification of the proposed development plan, along with potential impacts (e.g., on-site septic systems and other on-site activities) that

may adversely impact groundwater quality underlying or down gradient of the project or project area;

- b. Site plans or diagrams at an appropriate scale (1:2,400 or one (1) inch to two hundred (200) feet) showing the location of abandoned and active wells, springs, and surface water bodies within one thousand (1,000) feet of the project or project area; and
- c. A description of the geologic and hydrologic characteristics of the subject property including the following:

- (1) Lithologic characteristics and stratigraphic relationships;
- (2) Aquifer characteristics including recharge and discharge areas, depth to and static water-flow patterns, and an estimate of groundwater-flow velocity;
- (3) Contaminant fate and transport including probable migration pathways and travel time of a potential contaminant release from the site through the unsaturated zone to the aquifer(s) and through the aquifer(s), and how the contaminant(s) may be attenuated within the unsaturated zone and the aquifer(s);
- (4) Appropriate hydrogeologic cross-sections which depict lithology, stratigraphy, aquifer, units, potential or probable contaminant pathways from a chemical release, and rate of groundwater flow;
- (5) Existing groundwater quality; and

3. The report will be reviewed by the department, in consultation with the Clark County Health Department and the local water purveyor, in conjunction with the same process as the primary development permit. If approved, the applicant will receive a CARA permit allowing the activity on the subject property.

**Deleted:** (6) A proposal for quarterly monitoring of groundwater quality to detect changes and a description of corrective actions that will be taken if monitoring results indicate contaminants from the site have entered the underlying aquifer(s).¶

(Amended: Ord. 2005-04-15; Ord. 2018-01-03)

#### D. Appeals.

Appeals of county decisions under this chapter may be filed under the provisions of Chapter [40.510](#).

(Amended: Ord. 2005-04-15; Ord. 2018-01-03)

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E. Penalties.

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Any person, firm, or corporation who violates, disobeys, omits, neglects, or refuses to comply with any of the provisions of this chapter shall be subject to penalties as defined in Chapter [70.119A](#) RCW; Chapters [173-200](#) and [246-290](#) WAC; Title [32](#) of this code; and other local, state, and federal laws.

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*(Amended: Ord. 2005-04-15; Ord. 2018-01-03)*

#### **40.410.040 Incentives, Education, and Technical Assistance**

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A. Incentives.

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1. Best Management Practices (BMPs). Individuals who implement BMPs to safeguard groundwater may not be required to provide additional geologic and hydrologic characteristics of the subject property, pursuant to Sections [40.410.030](#)(B) and (C). Individuals shall implement the Washington Department of Ecology's Stormwater, Water Quality, Hazardous Waste, Wetland, and Solid Waste Programs BMPs; Chapter [13.26A](#); and BMPs from the Washington Departments of Health, Agriculture, Transportation, and State Conservation District Office.
  2. Maintain Open Spaces. An individual may receive a tax reduction for not creating impervious surface within Category I. Open space may allow recharge to replenish the groundwater supply.
  3. Land Exchange. The purpose of land exchange is to locate high-use impacts outside Category I. State agencies and local government may convey, sell, lease, or trade existing public lands in order to obtain public ownership over all or part of a CARA. Such exchanges may occur only upon agreement between the recorded landowner and state and local agencies authorized to exchange the subject land.

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*(Amended: Ord. 2005-04-15; Ord. 2009-03-02)*

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B. Education.

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1. Participation in the County's Business Partners for Clean Water Program. This program provides public recognition to businesses that implement BMPs, such as safely handling and disposing of chemicals in a CARA.

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2. Provide Free Information (Pamphlets, Fast Facts) to Building Permit Applicants About How to Protect Groundwater Inside a CARA. Applicants seeking additional information about water quality and resource management issues will be placed on the department's mailing list. In addition, owners will be notified if they are in Category I and will be placed on the department's mailing list to receive groundwater protection newsletters, fact sheets, and pamphlets.

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*(Amended: Ord. 2005-04-15)*

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C. Technical Assistance.

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To assist applicants in locating existing Group A and Group B public water supply wells in CARAs, the Clark County Health Department will provide a list of the physical location of all Group A and Group B public water supply wells in CARAs. A record of these wells will be available for review at the Clark County Health Department. Copies of the current Group A and Group B public water supply wells records may be purchased from the Clark County Health Department or Community Development department.

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*(Amended: Ord. 2005-04-15)*