CRITICAL AQUIFER RECHARGE AREAS (CARAs) REPORT WORKSHEET



ABOUT CARAS

Critical aquifer recharge areas (CARAs) are areas in the City of Sammamish that have a critical effect on aquifers used for potable water. CARAs include wellhead protection areas, which are the surface and subsurface areas surrounding the well, through which contaminants are reasonably likely to move toward and reach the aquifer beneath it.

CARAs are protected by requiring additional standards for activities within designated CARAs, including prohibiting activities that have the potential to increase the risk of contamination of drinking water supplies.

CARAs are defined under <u>SMC 21.04.040.B</u> and regulated in accordance with <u>SMC 21.03.020.U</u>.

For activities that require a critical area report for CARAs, please use the following report checklist. The checklist is intended to document conformance with applicable sections of code and reduce review time by City staff. If a requirement is not applicable, the report must include an explanation as to the lack of applicability.

To determine if a critical areas report is required, please refer to the <u>Critical Areas Review Flowchart</u> and/or <u>SMC 21.03.020.W</u> for additional information.

REPORTS MUST BE PREPARED BY A QUALIFIED PROFESSIONAL. A QUALIFIED PROFESSIONAL FOR CRITICAL AQUIFER RECHARGE REPORTS MUST BE A PROFESSIONAL HYDROGEOLOGIST OR GEOLOGIST LICENSED IN THE STATE OF WASHINGTON.

Code Reference

CARA definition SMC 21.04.040.B

CARA regulations SMC 21.03.020.U

Contents of a Critical Area Report SMC 21.03.020.1.3

Avoiding Impacts to Critical Areas (mitigation sequencing) SMC 21.030.020.K

Resources

Sammamish Property Tool

Questions?

Submit Project Guidance

City of Sammamish 801 228th Ave SE Sammamish, WA 98075 www.sammamish.us



Critical Area Report Requirements – Critical Aquifer Recharge Area	Location (document name, page number, etc.)	
General Report Requirements		
 Disclosure of presence of erosion hazard area and any mapped or identifiable critical areas within the distance equal to the largest potential required buffer applicable to the development proposal area on the applicant's property. 		
2. Documentation that the report has been prepared by a qualified professional hydrogeologist or geologist licensed in the State of Washington.		
3. Documentation of any field work or research used to identify, map, and classify critical areas in the project vicinity.		
 Photographic records of the proposal site and any critical areas before development. 		
5. A scale map of the subject property and the existing and proposed development.		
6. Assessment of impacts and risks to the critical aquifer recharge area related to the development and proposed site alterations.		
Assessment of impacts and risks to the critical aquifer recharge area affecting other properties and any critical areas buffers on them.		
8. Assessment of impacts and risks to the critical aquifer recharge area with cumulative impacts to any other critical area or buffer in project vicinity, including consideration of both proposed development and future potential development in vicinity based on zoning and development allowances.		
9. Analysis of mitigation sequencing in compliance with SMC 21.03.020.K.		
10. Analysis of conformance with applicable critical area regulations subsections.		
11. Description of how the proposal will be consistent with all other applicable local, state, and federal regulations.		
Activities with impacts in CARAs; commercial and industrial land uses that involve hazardous		
12 Description of information regarding geologic and hydrogeologic characteristics of		
the site including the surface location of all CARA classes located on site or immediately adjacent to the site and permeability of the unsaturated/vadose zone.		
13. Description of groundwater depth, flow direction and gradient.		

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14. Description of data on wells and springs within 1,300 feet of the project area.			
15. Location of other critical areas, including surface waters, within 1,300 feet of the project area;			
16. Historic hydrogeologic data for the area to be affected by the proposed activity;			
17. Presumptive best management practices (BMPs) and integrated pest management (IPM) proposed to be used. <u>If stormwater infiltration or injection</u> <u>facilities are proposed in CARA I or II areas, the Director may require a</u> <u>demonstrative BMP approach. See City staff before applying.</u>			
18. Discussion of the effects of the proposed project on the groundwater quality and quantity, including predictive evaluation of groundwater withdrawal and recharge effects on nearby wells and surface water features; predictive evaluation of contaminant transport based on potential releases to groundwater; and predictive evaluation of changes in the infiltration/recharge rate.			
19. A spill containment and response plan that identifies equipment and/or structures that could fail and with provisions for inspection as required by the applicable state regulations, repair and replacement of structures and equipment that could fail.			
20. A groundwater monitoring plan that monitors quality and quantity of groundwater, surface water runoff, and/or site soils. The description for criteria used to determine the need for site monitoring shall include, but not be limited to, the proximity of the facility to production or monitoring wells, the type and quantity of hazardous materials on site, and whether or not the hazardous materials are stored in underground vessels.			
New and Existing Commercial and Industrial Land Uses and Activities Located in Class 1 and Class 2 CARAs			
21. Hazardous materials inventory statement.			
Infiltration or Injection of Stormwater or Reclaimed Water			
22. In addition to requirements 1-19 above, the following must be documented to assess the assess the risks to the specific aquifer and viability of the proposed infiltration and/or injection unless waived by the City and local water surveyor.			
a. The location of the proposed infiltration and/or UIC;			
b. The proposed depth of the infiltration or injection;			
c. Treatment prior to infiltration or injection;			
d. Contributing area and infiltration rate (peak and average flows);			





e.	Depth to the shallowest groundwater level based on historic hydrogeologic data for the area to be affected by the proposed activity, or collection of a minimum of one year of water level data within or close proximity to the site to capture the seasonal high water groundwater level;	
f.	Discussion of how the system meets the demonstrable conditions for a UIC permit including evaluating the effects of the proposed project on the groundwater quality and quantity.	
g.	A monitoring plan to assess long term impacts to groundwater from the proposed infiltration system and/or UIC; and	
h.	A mitigation plan to be employed in the event the infiltration and/or UIC were to degrade groundwater quality.	
23. Fi pe	ll material: Documentation of fill quality standards and fill source compliance er SMC 21.03.020.T.7.d.	
24. G D 21	eothermal/heat exchange wells: Documentation of Washington State epartment of Ecology approval and Notice on Title in compliance with SMC 1.03.020.T.7.f.	