



King County

Department of Development and Environmental Services

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FINAL CODE INTERPRETATION L12CI002

Background

By letter dated March 29, 2012, Mr. Frederick H. Ockerman, on behalf of his clients David and Sally McCray, requested a code interpretation concerning the installation of a lake loop heat exchanger on the underside of a dock located in Lake Washington. The heat exchanger supports a heat pump installed in the McCray's residence. The heat exchanger was attached to the dock's existing support structures and did not disturb the lake bed. However, the piping from the heat pump to the dock and the heat exchanger did require grading and filling.

This code interpretation request relates to Code Enforcement Case E07G022. The McCrays did not obtain a clearing and grading permit for the installation of the lake loop heat exchanger.

Lake Washington is categorized as a Type S aquatic area under K.C.C. 21A.24.355, and therefore King County's critical area regulations apply to the site in question. See Ch. 21A.24 K.C.C. Lake Washington is also a shoreline of the state and subject to the Washington Shoreline Management Act (Chapter 90.58 RCW) and the King County Shoreline Management Program. (Former K.C.C. Title 25 and K.C.C. Chapter 21A.25).

Mr. Ockerman requests an interpretation of critical areas regulation K.C.C. 21A.24.045. Mr. Ockerman suggests two provisions that might authorize the installation of the heat exchanger. One provision allows utility facilities to be located within aquatic areas. The other allows a shoreline water dependent or water oriented use to be located in aquatic areas if consistent with K.C.C. Chapter 21A.25.

Discussion

K.C.C. 21A.24.045B generally allows alterations to aquatic areas only if they are listed in the table under K.C.C. 21A.24.045C and comply with the conditions in K.C.C. 21A.24.045D. An alteration may also be allowed as an alteration exception under K.C.C. 21A.24.070.

K.C.C. 21A.06.056 defines an alteration of a critical area to be "any human activity that results or is likely to result in an impact upon the existing condition of a critical area or its buffer...." Installation of piping itself to the underside of the dock might not be an alteration of a critical area. However, in order to install the heat exchanger, there was buffer disturbance. In addition,

should the heat exchanger pipe leak or break, the coolant could spill into the water and resulting in an impact to the existing condition of the critical area. Because of these factors, installation of the lake loop heat exchanger to the underside of the dock is an alteration under K.C.C. 21A.06.056.

A. The heat exchanger is not a utility facility under K.C.C. 21A.06.1350.

Under K.C.C. 21A.24.045C, a utility facility may be located in an aquatic area or aquatic area buffer, subject to conditions in K.C.C. 21A.24.045D.32 and D.34.

A utility facility is defined in K.C.C. 21A.06.1350 as a "facility for the distribution or transmission of services" The services include, in part, telephone exchanges, water pipelines, and electrical substations. The common element of these services and the others listed in the definition is that they provide a utility service to the community. In this case, the lake loop heat exchanger is connected to a heat pump that serves a single house. It is not part of a larger utility providing services to multiple properties. As such, the heat exchanger is not a utility facility. Mr. Ockerman recognizes that treating the heat exchanger as a utility facility "would require a rather substantial contortion of the areas listed" in K.C.C. 21A.24.045 under the "Utilities and other infrastructure" heading. In addition, even if the heat exchanger were considered to be a utility facility, conditions D.32 and D.34 limit those facilities to being located either in a roadway or in a utility corridor. The McCrays' heat exchanger does not comply with either of these provisions.

B. The heat exchanger is not a water dependent use under K.C.C. 21A.06.1385A.

Mr. Ockerman suggests that the lake loop heat exchanger should be considered to be a water dependent use. K.C.C. 21A.24.045D.65 allows a water dependent or water oriented use to be located in an aquatic area if the use is consistent with K.C.C. Chapter 21A.25, the Shoreline Management Act (Chapter 90.58 RCW), and the King County Comprehensive Plan.

K.C.C. 21A.06.1385A defines a "water dependent use" as "a use or portion of a use that cannot exist in a location that is not adjacent to the water and that is dependent on the water by reason of the intrinsic nature of its operation."¹ The lake loop heat exchanger does not meet this definition. The heat pump and the heat exchanger are not required to be adjacent to the water and the operation of the heat pump is not dependent on being near the water. A heat exchanger may be located in the ground or above the ground. In the McCrays' case, locating the heat exchanger in the water under the dock may be a cost effective option, but that does not convert the heat exchanger into a water dependent use.²

¹ K.C.C. 21A.06.1385A was added to the King County Code when the King County Council approved an updated Shoreline Master Program in November 2010. The codified version does not accurately reflect the definition as approved by the King County Council in Ordinance 16985. The amendatory section reads as follows: "~~((⁽²⁾)Water dependent use((⁽¹⁾ or "water dependent development" means)): a ((principal)) use ((which can only)) or portion of a use that cannot exist ((where the land-water interface provides biological or physical conditions necessary for the use)) in a location that is not adjacent to the water and that is dependent on the water by reason of the intrinsic nature of its operations.~~"

² K.C.C. 21A.06.1385 also defines "water dependent use." That definition defines a "water dependent use" as "a land use which can only exist when the interface between wet meadows, grazed land and water provides the

C. The heat exchanger does not qualify for an alterations exemption under K.C.C. 21A.24.070.

K.C.C. 21A.24.070A provides a process for approving "alterations to critical areas ... not otherwise authorized by" K.C.C. Chapter 21A.24. One type of alteration applies to linear alterations that connect to or alter "a public roadway, regional light rail transit line, public trail, utility corridor or utility facility or other public infrastructure owned or operated by a public utility." K.C.C. 21A.24.070A.1.e.(1). As discussed above, since it is not a utility facility, the McCrays' heat exchanger does not qualify for a linear alteration exception.

K.C.C. 21A.24.070A.3 authorizes nonlinear exceptions, but prohibits the alteration of aquatic areas. Since the heat exchanger has resulted in the alteration of an aquatic area, it does not qualify for a nonlinear alteration exception.

K.C.C. 21A.24.070B authorizes DDES to "approve alterations to critical areas, critical area buffers and critical area setbacks if the application of this chapter would deny all reasonable use of the property." There has been no claim that failure to authorize the installation of the heat exchanger would deny the McCrays reasonable use of their property. There are many alternatives to the installation of the heat pump system they have installed that would allow them to use their property.

Mr. Ockerman states that the Department of Development and Environmental Services (DDES) has approved heat pumps in other installations. DDES staff are aware of only one lake loop heat exchanger that has been approved for installation. In 1999, DDES approved a lake loop heat pump system installation in Lake Joy. See, L99SX351. The lake loop heat exchanger in L99SX351 was approved as a shoreline exemption and was not subject to the sensitive areas regulations. Lake Joy is a shoreline of the state subject to the Shoreline Management Act and King County's Shoreline Master Program. Under the sensitive areas ordinance in effect in 1999, lakes were not considered to be a critical area unless they met the definition of a wetland. Under the critical areas ordinance (K.C.C. Ch. 21A.24), effective January 1, 2005, lakes are now considered to be an aquatic area, a type of critical area. As a result, installations like the one approved for Lake Joy in 1999 are subject to the critical area regulations.

Mr. Ockerman also states that the McCrays have complied with all state and federal requirements. The question of whether the system complies with state and federal requirements is independent of whether it complies with the King County Code. Unless the state or federal government has preempted local authority, King County may adopt regulations that are more protective of the environment. There is nothing to indicate such preemption here.

Mr. Ockerman also notes that the King County Comprehensive Plan includes a chapter that is reserved for the Shoreline Master Program. The King County Council approved an updated Shoreline Master Plan and accompanying shoreline regulations on November 30, 2010. The

biological or physical conditions necessary for the use." Even under this definition, the heat exchanger would not qualify as a water dependent use.

updated plan and regulations do not take effect until approved by the Washington Department of Ecology.

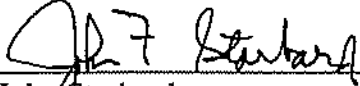
Decision

A lake loop heat exchanger that serves a heat pump for a single family residence and that is installed under a dock located in Lake Washington is an alteration to a critical area. The heat exchanger is not a utility facility, as defined in K.C.C. 21A.06.1350, and therefore cannot be located in an aquatic area under the circumstances that apply to utility facilities. A lake loop heat exchanger is also not a water dependent use as defined in K.C.C. 21A.06.1385A and is, therefore, not allowed under the provisions that allow water dependent uses.

A lake loop heat exchanger serving a single family residence is not a linear alteration as defined in K.C.C. 21A.24.070A and does not qualify for a linear alteration exception under K.C.C. 21A.24.070A.1. Since nonlinear alteration exceptions may not result in an alteration to an aquatic area, the lake loop heat exchanger is not authorized under K.C.C. 21A.24.070A.3. The heat exchanger also does not qualify as a reasonable use under K.C.C. 21A.24.070B. There are alternative designs that would support a heat pump and do not require locating the heat exchanger in the aquatic area.

Finality of Code Interpretations

Under K.C.C. 2.100.040, a code interpretation that relates to a permit application or a code enforcement action is final when the department makes its decision on the underlying permit or code enforcement action. Under K.C.C. 2.100.050, the administrative appeal of a code interpretation that relates to a code enforcement case is consolidated with the appeal of the underlying code enforcement action. The Director determines that this code interpretation relates to Code Enforcement Case E07G022. Any appeal of this code interpretation shall be consolidated with an appeal of the Department's decision on Code Enforcement Case E07G022.



John Starbard
Director
Development and Environmental Services

Date 06/12/12