



TECHNICAL MEMORANDUM

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Project Name: Bremerton CAO 2025

Facet Number: 2507.0380.00

Riparian Management Zones and Buffer Widths

Regulatory Framework for Critical Areas Classification

Under the Washington Administrative Code (WAC), critical areas include wetlands, fish and wildlife habitat conservation areas (FWHCAs), frequently flooded areas, geologic hazardous areas, and critical aquifer recharge areas, as identified in WAC 365-190-080. Riparian management zones (RMZ) are not listed as a separate category of critical areas in the WAC. Streams are regulated as FWHCAs, and their buffers are the primary regulatory mechanism identified in WAC 365-190-130(3)(a)(v) used by local jurisdictions to protect the ecological functions of streams and riparian habitat. This regulatory framework is reflected in the revised Bremerton Municipal Code (BMC) 20.14.730 and does not define RMZs as a distinct critical area.

Although RMZs appear in WDFW Riparian Management recommendations, their use in local regulation is discretionary. Local governments are required to protect the functions and values of FWHCAs but have flexibility in determining the specific regulatory tools used to accomplish this protection. Bremerton uses buffers as the regulatory tool in BMC 20.14.730 to protect stream ecological functions and values.

Riparian Management Zones as Scientific Framework

Facet prepared a Best Available Science (BAS) report which describes RMZs and the area of ecological influence adjacent to streams, where functions such as microclimate regulation, shading, large woody debris recruitment, nutrient cycling, hydrologic interaction, and habitat occur. The BAS identifies RMZs as scientific constructs useful for understanding riparian processes, drawing on WDFW guidance, which describe the cumulative effectiveness of riparian functions with distance from the stream channel.

While RMZs are supported by scientific literature, neither the WAC nor the BMC assign them a regulatory role. Instead, jurisdictions are directed to rely on scientifically informed buffers, which are feasible, context appropriate, and protective of streams. The RMZ concept informs but does not dictate Bremerton's regulatory approach.

Use of Site Potential Tree Height in Best Available Science

The BAS report identifies site potential tree height (SPTH) as a scientific method for estimating the extent of riparian influence. The SPTH describes the maximum height of mature trees at a given site and is used in certain ecological models to estimate riparian effectiveness. In Bremerton, SPTH ranges from 100 to 231 feet, as documented in the BAS report.

The BAS recognizes SPTH as one source of scientific information but does not identify it as the required method for determining buffer widths. Instead, BAS recommends SPTH alongside other scientific, physical, and policy considerations. The WAC does not mandate the use of SPTH for buffer establishment. WAC 365-195-915 requires jurisdictions to incorporate BAS but also consider local conditions, feasibility, and the need to balance resource protection with reasonable use of property.

Given the constrained condition of many urban stream corridors in Bremerton, SPTH does not reflect the full range of factors relevant to determining implementable buffer widths.

Use of Best Available Science in Establishing Bremerton’s Stream Buffer Widths

In compliance with WAC 365-195-915, the City evaluated multiple sources of BAS. Additionally, the City conducted a GIS analysis comparing SPTH RMZ widths to existing buffer conditions and parcel encumbrance. This analysis, presented in the BAS Report Appendix A, demonstrates that approximately 86 percent of Type F and all Type N stream segments fall below SPTH RMZ widths and the implementation of full SPTH widths would increase the extent of regulated areas, affecting more than 3,000 acres within City limits (See Table 9, page 43 of SPTH memo, referenced below).

Table 1. Comparison of parcels potentially affected increased buffers widths.

	Total Area (Acres)	# of Affected Parcels
Type F (150 ft)	945.4	462
Type N (50 ft)	554.1	210
SPTH	3161.1	872

The City updated buffer widths for Type F streams to 200 feet (from 150 feet) and Type N streams to 100 feet (from 50 feet and 35 feet for Np and Ns, respectively) reflecting a synthesis of scientific information, including consideration of pollution removal (minimum of 100 feet), temperature regulation needs, large woody debris recruitment and other ecological functions identified in the BAS report. These represent significant increases in stream buffer protection over existing regulations.

Additionally, BMC 20.14.730 includes requirements for buffer enhancement, increased buffer widths to include streamside wetlands, and performance standards for anadromous fish protections, which provide further ecological protection beyond buffer width alone.

Basis for Regulatory Approach

The WAC requires jurisdictions to incorporate BAS when designating and protecting critical areas while also considering local conditions, policy objectives, and reasonable use. The RMZ and SPTH concepts described in the BAS report provide valuable scientific context, but they are not regulatory mandates. Bremerton's approach uses this scientific information in combination with local conditions, urban constraints and housing growth mandates, and regulatory feasibility to establish protective and implementable stream buffer standards consistent with State law and the City's ecological goals.

Coordination Requirements and Recent Updates to Stream Buffer Provisions

The following updates support the buffer width increases adopted by the City by reinforcing ecological protections, emphasizing functional outcomes, and providing clearer expectations for coordination with State and Tribal resource managers during development review. Collectively, these code updates provide a strengthened regulatory foundation that complements the BAS supported buffer width increases described in this memorandum.

Coordination with WDFW and Tribes

Recent revisions to the Bremerton Municipal Code include strengthened requirements for early coordination with WDFW and affected Tribes as part of critical area review. BMC 20.14.130(d) authorizes the Department of Community Development to consult with state agencies and Tribes during the review of special reports, with a 14-day comment period. Additional agency/Tribal coordination requirements are included in BMC 20.14.740(f) for FWHCAs, and BMC 20.14.750(a), which affirms all impacts to critical areas and buffers must be mitigated using BAS and achieve no net loss of ecological functions and values.

Buffer Averaging and Buffer Reduction Standards

Updates to buffer modification allowances in BMC 20.14.730(d)(4) clarify buffer averaging cannot reduce the total buffer area and the minimum buffer width after averaging must remain sufficient to protect ecological functions. Updates to buffer reduction standards for existing development emphasize any reduced buffer must result in greater riparian function than existing conditions, meet the no net loss standard, and reflect increased emphasis on functional improvement rather than dimensional compliance. Together, these provisions improve consistency and predictability during permit review by clarifying expectations for buffer modification and ensuring adjustments remain scientifically defensible.