



Update on Best Available Science and Critical Areas Ordinance Review 2024 King County Comprehensive Plan December 2023

As part of the 2024 King County Comprehensive Plan update, the County is required to review its policies and Critical Areas Ordinance (CAO) to include the current Best Available Science (BAS) and reflect changes in state law. The updated Comprehensive Plan and CAO must be adopted by December 2024. This document reports on BAS background, approach to review, progress to date, initial BAS findings and recommendations, and next actions. A final BAS report will be transmitted to the Council on March 1, 2024, along with BAS-based proposed policy and code amendments to be incorporated into the 2024 Comprehensive Plan Update that was transmitted to the Council in December 2023 concurrent with this report.

Background

The Growth Management Act (GMA) requires that counties and cities protect the functions and values of critical areas, including wetlands, critical aquifer recharge areas (CARAs), frequently flooded areas, geologically hazardous areas, and fish and wildlife habitat conservation areas (FWHCAs). “Protection” in the context of critical areas refers to both preservation of the functions and values of the natural environment and to safeguarding the public from hazards to health and safety (WAC 365-196-830). Examples of functions and values of wetlands include preventing downstream flooding, filtering pollutants, and supporting stream flows in summer.

CAOs must be developed using BAS and give special consideration to conserve or protect anadromous¹ fisheries, such as salmon. Where proposed policies and regulations depart from BAS, the jurisdiction must provide the rationale, including legal, social, cultural, economic, and political information, and identify potential risks associated with the departure (WAC 365-195).

King County developed BAS to support the development and adoption of the County’s first CAO in 2004. Since then, the state has conducted robust review and update of BAS for wetlands and riparian areas. Additionally, the state has added a standard of “no net loss” to protection of functions and values of critical areas at the ecosystem scale (WAC 365-196-830). While the WAC acknowledges that jurisdictions may allow localized impacts to critical area functions and values, development regulations must preserve the existing functions and values of critical areas. Avoidance is the most effective way to protect critical areas. If development regulations allow harm to critical areas, they must require compensatory mitigation of the harm.

¹ Anadromous refers to fish or fish species that spend portions of its life cycle in both fresh and salt waters, entering fresh water from the sea to spawn.

Local governments may develop and implement alternative means of protecting critical areas from some activities using best management practices or a combination of regulatory and nonregulatory programs. King County uses a combination of regulatory and non-regulatory tools (e.g., open space conservation, habitat restoration, tax incentives, technical assistance) to protect critical areas functions and values.

BAS Review

Reviewing BAS and developing policy and code updates is a significant body of work. The Executive requested and the Council approved additional resources for staff and consulting to support BAS review and code updates as part of the 2023-2024 King County Biennial Budget. The state issued updated guidance for BAS review in December 2022. The County accelerated hiring for a project manager and code writer, and BAS review was fully underway by March 2023.

King County’s 2024 BAS review was designed to expand on its 2004 BAS review.² It aims to ensure compliance with current GMA requirements and administrative guidance, with a heightened emphasis on achieving no net loss of critical area functions and values. Additionally, it seeks to incorporate significant state agency updates to BAS for riparian areas and wetlands while bolstering local management and protection of critical areas. King County relied on the Washington State Department of Commerce Critical Areas Handbook and Checklist for Critical Areas as the primary guidance to scope 2024 BAS review for each critical area. King County coordinated with state agencies to inform BAS review and evaluate considered regulatory changes.

The following table provides a high-level summary of the County’s BAS findings, existing CAO regulations, and how the Executive is considering updating the CAO to be consistent with new requirements of state law, including the mandate that counties ensure no net loss of critical areas functions and values at the ecosystem scale. Additional information on BAS findings and policy considerations is found in the “Considered Regulatory Updates” section below. A more detailed summary of code changes under consideration for aquatic areas and wetlands can be found in Appendix A.

Critical Area	Topic	Best Available Science	Current King County Code	Considered Change*
Riparian Areas (Formerly Aquatic Area Buffers)	Level of Protection (Width)	Riparian areas ranging from 180 ft** - 235 ft for all water types.	Shoreline: 165 ft (115 ft in UGA***) Fish Bearing: 165 ft (115 ft in UGA) Non-fish-bearing: 65 ft Other: 25 ft	Increase riparian area widths to strengthen protection while accounting for other GMA goals.
	Channel Migration Zone (CMZ) Areas	Riparian area measured from edge of CMZ or floodplain, whichever is greater.	Riparian areas are measured from channel's edge. Extended where severe CMZ is greater than riparian area width.	Update methodology for measuring riparian areas where CMZs are mapped.
	Mitigation Ratios	3:1 on-site 12:1 off-site No allowances	1:1 on-site 3:1 or 2:1 off-site Some allowances for flexibility.	Increase on- and off-site compensatory mitigation ratios.
Wetlands	Level of Protection (Width)	Matrixed by wetland category and land use intensity. 50 ft to 300 ft range	Matrixed by wetland category and land use intensity. 25 ft to 300 ft range Several allowances.	Increase buffer widths for some wetlands. Update and clarify allowances.

² King County 2004 [Volume I: Review of Scientific Literature](#) and [Volume II: Assessment of Proposed Ordinances](#)

Critical Area	Topic	Best Available Science	Current King County Code	Considered Change*
		No or limited allowances.		
	Enhancement-based Mitigation Ratios	Matrixed by wetland category. Range 2:1 to 16:1	Matrixed by wetland category. Range 2:1 to 10:1	Increase mitigation ratios for one type of mitigation: enhancement-based mitigation.
Geologically Hazardous Areas	Alluvial Fan Development Standards	Manage alluvial fans, debris flow areas to reduce risk to public health and safety and protect habitat.	Current regulations to reduce public health and safety risk are limited.	Establish alluvial fan development standards.
	Tsunami Hazard Area Development Standards	Designate and establish development standards for tsunami hazard areas.	Tsunami hazard areas not explicitly regulated.	Establish tsunami hazard area development standards.
Livestock and Commercial Agriculture	Farm Field Access Drives	Require permit and compliance with standard riparian area, wetland buffer widths.	Permits not required for farm field access drives and critical area impacts are unmitigated.	Maintain flexibility while updating and clarifying farm field access drive requirements to limit critical area impacts.
	Livestock Management Ordinance	Require compliance with standard riparian area, wetland buffer widths.	Allowances allow riparian area and wetland buffers to be reduced to 0 ft to 25 ft.	Maintain flexibility while adjusting allowances dependent on water type or wetland category for greater protection of water quality.

* See more details in Appendix A

** ft = feet

*** UGA = Urban Growth Area

Tribal Consultation

Government to government consultation with Indian tribes has been initiated with the Suquamish Tribe, Muckleshoot Indian Tribe, Tulalip Tribes, Snoqualmie Tribe, and Puyallup Tribe, and is ongoing. Consultation will inform the final proposed code and policy updates being transmitted on March 1, 2024.

Engagement with Community Partners

King County engaged County advisory committees, community partners, and development community interests in fall of 2023 to review BAS findings and regulatory changes under consideration and to collect input on considered changes. This engagement included the following groups and organizations: Joint Rural Area Team; CARE/SWAN; Skyway Coalition; Homestead Community Land Trust; Community Land Conservancy; White Center Community Development Association; Watershed Salmon Recovery Forums; King Conservation District; King County Agriculture Commission; Fish, Farm, Flood Implementation Oversight Committee; Master Builders Association of King and Snohomish Counties; Seattle King County Realtors Association; Futurewise; and Puget Soundkeeper Alliance.

Themes shared with the County during this early input included:

- Support for using a combination of regulatory and non-regulatory measures to protect critical areas functions and values and achieve no net loss at an ecosystem scale.
- Request that the County affirm its commitment for policies and regulations to support ongoing agricultural operations and that changes would only apply to newly permitted development and land use activities.
- Importance of proactive and consistent code enforcement.
- Recommendation for investment in outreach and education about the value of wetlands, riparian areas, and other critical areas, King County regulations that protect them, and incentives (e.g., tax incentives) for property owners to protect habitat and water quality.
- Concern that increasing base regulatory requirements for protection of critical areas will make it more difficult to qualify for voluntary incentive programs, such as the Public Benefit Rating System.
- Concern about impacts to housing development in the urban area, especially affordable housing in the Skyway community. Interest in updates to critical areas regulations that are more supportive of community stewardship and restoration projects.
- Range of viewpoints about riparian area widths necessary to ensure no-net loss; concern about urban riparian area widths under consideration potentially being insufficient to protect the water quality of streams and Puget Sound; concern about riparian area and wetland buffer widths placing disproportionate regulatory burden on lower income homeowners in urban unincorporated King County.
- Interest in further measures to protect groundwater flows that help to keep water temperatures cool.

Conversations with these partners are ongoing and will continue to inform further development of the code update proposal. Opportunity for general public input will also occur as noted in the Next Actions section below.

Considered Regulatory Updates

The County must decide how to update Comprehensive Plan policies and development regulations to adequately protect critical areas and public health and safety while meeting GMA and Comprehensive Plan goals for equity, affordable housing, and agriculture. The County is carefully reviewing the impacts of considered changes as it seeks to balance multiple, sometimes competing goals.

Considered regulatory updates may affect how a property in unincorporated King County can be used or developed if there are one or more critical areas, such as a stream or wetland, on or adjacent to the property. This would affect new development and substantial changes to existing development. In those cases, this might result in needing to take additional actions, such as conducting a critical area study to identify potential impacts and mitigation measures or changing the location or size of the building footprint.

Based on BAS findings, tribal consultations, and early engagement with key partners the following is a summary of considered changes to County policies and development regulations; see more details in Appendix A. Companion non-regulatory actions are also discussed.

- **Wetlands:** King County is considering measured increases to some wetland buffers for some categories of wetlands. The width of a wetland buffer is determined by wetland category and the proposed intensity of adjacent land use. Considered updates to the values in King County's wetland buffer table (King County Code (K.C.C.) 21A.24.325) can be found in Appendix A. Considered updates to buffer widths are informed by state BAS and driven by the need to improve protections for wetland functions and values (e.g., water quality, flood water storage, wildlife habitat) in a changing climate. Considered updates to wetland mitigation requirements (K.C.C. 21A.23.340) can be found in Appendix A. Mitigation provides a pathway to compensate for unavoidable impacts to critical areas. In addition to wetland buffer and mitigation ratio changes, King County is considering other regulatory updates and implementing non-regulatory programming to protect wetland functions and values. This includes a significant investment in updating the County's wetland mapping, which will replace dated mapping and provide more accurate wetland location information to the public, permit applicants, and permit review staff.
- **Riparian Areas:** King County is considering increasing the size of riparian areas (formerly aquatic area buffers). The width of a riparian area is determined by the type of adjacent aquatic area (e.g., lake or fish-bearing stream) and whether the aquatic area is located in or outside of the Urban Growth Area (UGA). Considered updates to riparian area widths (K.C.C. 21A.24.358) can be found in a summary table in Appendix A. Considered updates are informed by state BAS and driven by the need to improve protections for riparian area functions and values (e.g., water quality, fish and wildlife habitat, bank stability) in a changing climate. Considered updates include a BAS departure for the width of riparian areas adjacent to N- and O-type aquatic areas. Considered updates also maintain the County precedent of limiting riparian area protections in the UGA to prioritize urban housing development and economic growth. Staff analysis demonstrates that considered changes in riparian area widths will have limited impact on capacity for housing development in the urban unincorporated area. In addition to riparian area widths, King County is considering other regulatory updates such as changes to riparian area mitigation ratios. King County is also implementing non-regulatory programming to support protection of riparian area functions and values and demonstrate special consideration for anadromous fisheries. This includes updates to County stream mapping, which will replace dated mapping and provide more accurate information to the public, permit applicants, and permit review staff about the location of different aquatic areas.
- **Geologically Hazardous Areas:** King County is considering updates to development regulations that reduce public health and safety risks associated with geologically hazardous areas (GHAs). Specifically, King County is considering implementing development regulations for the management of alluvial fans. Alluvial fans are a type of landslide hazard area that occur along some stream channels. Hazardous geologic processes occur on alluvial fans (e.g., debris flows, debris floods, flash flooding) that can create significant risks to critical infrastructure and public health and safety. Considered development standards for alluvial fans are informed by these risks, BAS, and development regulations in place at other jurisdictions in the region. King County is also considering implementing development regulations for Tsunami Hazard Areas. King County is reviewing regulations in place at other regional jurisdictions, as well as local

shoreline and flood hazard regulations, to inform considered Tsunami Hazard Area development regulations.

- **Regulatory Allowances for Livestock and Commercial Agriculture:** King County is considering updates to regulatory allowances that allow agricultural land uses to impact critical areas such as wetlands, riparian areas, and aquatic areas. Updates to regulatory allowances are informed by BAS and are necessary to limit impacts to critical area functions and values. Considered updates are also informed by the County's continued commitment to support a local, economically viable agricultural industry.
- **Streamlined Permitting for Habitat Restoration:** King County is considering regulatory updates that would streamline permitting processes for habitat restoration and fish passage projects. Considered updates would allow restoration efforts to occur more quickly, restoring critical area functions that support wildlife and anadromous fish species, such as salmon.

Next actions

This report provided background and a status report on the BAS review, summary of significant changes in state law and state-recommended BAS requirements, tribal consultation, community engagement, and further code and policy amendments under consideration. Next actions include:

- Issuance of a State Environmental Policy Act Draft Environmental Impact Statement (EIS) in December 2023;
- Further refinement of CAO amendments informed by BAS review, GMA goals, partner input, public comments on the Draft EIS, and continued Indian tribal consultation;
- Finalization of BAS report, including identification of departures from BAS, description of rationale, risk assessment to critical areas functions and values, and identification of regulatory and non-regulatory actions to mitigate risks;
- Review by state and federal agencies for compliance with applicable state and federal laws;
- Submittal of additional BAS review-driven policy and code amendments by March 1, 2024, as a supplement to the 2024 Comprehensive Plan Package being transmitted in December 2023;
- Issuance of a final EIS in Fall 2024;
- Consideration of further BAS-driven policy and code amendments by Council in conjunction with the 2024 Comprehensive Plan package, with adoption required by state law by December 2024; and
- Opportunities for public review and input throughout 2024.

Separate from the BAS and CAO body of work but related to implementation of any adopted CAO changes, the 2023-2024 Biennial budget directs the County to review code enforcement regulations in King County Code Title 23 and related development regulations.³ A report on that review, as well as legislation that would implement any recommendations in the report, will be transmitted to the Council in late 2024.

³ Ordinance 19633, Section 67, Provision P1, as amended

Appendix A

The following tables provide more details about considered changes to current K.C.C. standards. Considered deletions are shown in ~~strike through~~ and considered additions are shown in underline.

Considered Changes to Wetland Buffer Widths

Wetland Category and Characteristics	Intensity of Impact of Adjacent Land Use		
	High Impact	Moderate Impact	Low Impact
Category I			
Wetlands of High Conservation Value	250 ft <u>300 ft*</u>	490 ft <u>225 ft</u>	425 ft <u>150 ft</u>
Bog	250 ft <u>300 ft</u>	490 ft <u>225 ft</u>	425 ft <u>150 ft</u>
Estuarine	200 ft <u>300 ft</u>	450 ft <u>225 ft</u>	400 ft <u>150 ft</u>
Coastal Lagoon	200 ft <u>300 ft</u>	450 ft <u>225 ft</u>	400 ft <u>150 ft</u>
Forested	Buffer width to be based on score for habitat functions or water quality functions		
Habitat score from 8 to 9 points (high level of function)	300 ft	225 ft	150 ft
Habitat score from 6 to 7 points (moderate level of function)	150 ft	110 ft	75 ft
Category I wetlands not meeting any of the criteria above	100 ft	75 ft	50 ft
Category II			
Estuarine	150 ft	110 ft	75 ft
Habitat score from 8 to 9 points (high level of function)	300 ft	225 ft	150 ft
Habitat score from 6 to 7 points (moderate level of function)	150 ft	110 ft	75 ft
Category II wetlands not meeting any of the criteria above	100 ft	75 ft	50 ft
Category III			
Habitat score from 8 to 9 points (high level of function)	300 ft	225 ft	150 ft
Habitat score from 6 to 7 points (moderate level of function)	150 ft	110 ft	75 ft

Wetland Category and Characteristics	Intensity of Impact of Adjacent Land Use		
	High Impact	Moderate Impact	Low Impact
Category III wetlands not meeting any of the criteria above	80 ft	60 ft	40 ft
Category IV	50 ft <u>60 ft</u>	40 ft <u>45 ft</u>	25 ft <u>35 ft</u>

*ft = feet

Considered Changes to Wetland Mitigation Ratios

Category and type of wetland	Wetland reestablishment or creation	Wetland rehabilitation	1:1 wetland reestablishment or wetland creation (R/C) and wetland enhancement (E)	Wetland enhancement only
Category IV	1.5:1	3:1	1:1 R/C and 2:1 E	6:1
Category III	2:1	4:1	1:1 R/C and 2:1 E <u>4:1 E</u>	8:1
Category II estuarine	Case-by-case	4:1 rehabilitation of an estuarine wetland	Case-by-case	Case-by-case
All other Category II	3:1	8:1 <u>6:1</u>	1:1 R/C and 4:1 E <u>8:1 E</u>	12:1
Category I forested	6:1	12:1	1:1 R/C and 10:1 E <u>16:1 E</u>	Case-by-case
All other Category I	4:1	8:1	1:1 R/C and 6:1 E <u>12:1 E</u>	Case-by-case
Category I wetlands of high conservation value	Not allowed	6:1 rehabilitation of a wetland of high conservation value	Case-by-case	Case-by-case
Category I coastal lagoon	Not allowed	6:1 rehabilitation of a coastal lagoon	Case-by-case	Case-by-case
Category I bog	Not allowed	6:1 rehabilitation of a bog	Case-by-case	Case-by-case
Category I estuarine	Case-by-case	6:1 rehabilitation of an estuarine wetland	Case-by-case	Case-by-case

Considered Changes to Riparian Area Widths

Aquatic Area Type	Description	Riparian Area Width Inside the UGA*	Riparian Area Widths Outside the UGA
Shoreline (S)	Shorelines of the state.	115 ft <u>180</u> ft**	165 ft <u>200</u> ft
Fish (F)	Not S type; contain fish or fish habitat.	115 ft <u>180</u> ft	165 ft <u>200</u> ft
Non-fish-bearing (N)	Not S or F type; connected by surface water to S or F.	65 ft***	65 ft***
Other (O)	Not S, F, or N type.	25 ft <u>50</u> ft	25 ft <u>50</u> ft

* UGA = Urban Growth Area
 ** ft = feet
 *** Still under review; considered changes to be determined