

CITY OF KIRKLAND CRITICAL AREAS REGULATIONS TECHNICAL REPORT

Part A- Review of Existing Conditions and Best Available Science
Part B- Gap Analysis

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EXECUTIVE SUMMARY

To comply with Growth Management Act (GMA) mandates, the City of Kirkland updated its Comprehensive Plan in 2015, and is currently in the process of updating its Critical Areas Ordinance. The City last updated its critical areas regulations in 2002. Under the Growth Management Act, RCW 36.70A.130, the City was required to complete its periodic updates to the Comprehensive Plan and development regulations by June 30, 2015, and to update every eight years thereafter. Updates to Critical Areas regulations can be completed one year later. Thus, the state deadline is June 30, 2016, to adopt amendments to its Critical Areas Ordinance. To support the City's GMA-mandated Critical Areas Ordinance update, The Watershed Company prepared a two-part technical report, Part A – Review of Existing Conditions and Best Available Science, and Part B – Gap Analysis of the City of Kirkland's Critical Areas Regulations. These documents A) review existing conditions in the City and relevant science related to management of critical areas, and B) recommend updates to the City's critical area provisions that comply with State guidance and best available science (BAS).

Part A – Review of Existing Conditions and Best Available Science (BAS) describes critical area resources within the City of Kirkland (City) and documents BAS-based approaches to protecting the functions and values those areas provide. Existing conditions in the city are based on the city's GIS mapping, existing City documents, other publically available documentation, and The Watershed Company staff's familiarity with the City from many years of on-call environmental review and project work. The BAS review references recent BAS reports prepared for nearby jurisdictions and new information relevant to the City. Findings for wetlands; fish and wildlife habitat conservation areas (FWHCAs), including streams; and frequently flooded areas (FFA) are summarized in-brief below. The BAS review does not address geologically hazardous areas, as those areas are being reviewed separately.

- Wetlands: Kirkland contains more than 400 acres of mapped wetlands. Wetlands are highly productive ecosystems that are valued for providing water quality functions, hydrologic functions, and habitat functions. Primary BAS-based wetland protections include wetland identification, classification based on functions, and sufficiently protective buffers. When impacts to wetlands and/or buffers are proposed, mitigation sequencing, compensatory mitigation, and compliance oversight are central to maintaining wetland functions and values.
- Fish and Wildlife Habitat Conservation Areas (FWHCAs): Kirkland is on the eastern shoreline of Lake Washington, all 15 drainage basins within the city drain to Lake Washington. Several streams in the City provide habitat for salmonids, including state- and federally-listed species. Other priority species, including bald eagle, great blue heron, and pileated woodpecker are documented within the city. FWHCAs support a variety of functions, including dynamic instream habitats, water quality, streambank stability, organic inputs, and habitat connections across the landscape. Streams are typically protected through identification, classification, and protective buffers. When

priority habitats and/or species are present, Washington State Department of Fish and Wildlife (WDFW) species-specific management recommendations provide BAS-based management strategies.

- Frequently Flooded Areas (FFAs): Four floodplain areas are mapped within the city, three of them are associated with large wetland complexes, and most of the floodplain areas are within City-owned properties. Frequently flooded areas (FFA) are managed to reduce potential risks to public safety. FFAs can also provide valuable instream habitat benefits, such as low-velocity instream habitat during high-flow events. To comply with the conditions of the 2008 FEMA Biological Opinion and incorporate BAS on FFA functions, floodplain habitat assessments are required in addition to standard flood safety measures for projects within floodplains.

Part B – Gap Analysis of the City of Kirkland’s Critical Areas Regulations reviews the existing critical areas regulations and identifies areas of the code that should be updated to be consistent with science-based recommendations. General recommendations concerning critical areas regulations organization and content are also provided in the gap analysis. Recommendations in the gap analysis are based on a review of the GMA requirements, the existing conditions and BAS review (Part A), current critical area regulations (KZC Chapter 90 – Drainage Basins), and recent updates to critical area regulations in neighboring jurisdictions. Critical area regulations will need to align with BAS practices, and any deviations from BAS recommendations must be documented and justified. In general, recommendations based on BAS-based guidance from the Department of Ecology are fairly prescriptive, whereas recommendations from primary BAS literature allow for more flexibility of policy implications and application to revising City code. Recommendations for Kirkland’s critical areas code update are summarized in brief below. As with Part A, KZC Chapter 85 – Geologically Hazardous Areas, is not addressed in this gap analysis. The City has begun the process of updating Kirkland’s geologic hazard maps using new advanced mapping tools such as Lidar, and then will evaluate the regulations in Chapter 85 once the mapping is done and after completion of the amendments to Chapter 90.

- Introduction summary: This code update provides an opportunity for the City to reorganize critical area regulations to better align with the definitions set forth in the GMA. The small wetlands exemption should be omitted or revised to align with BAS. General exceptions should be reviewed and clarified. Definitions could be reorganized and updated to reduce redundancy and better align with recent guidance and BAS.
- Wetlands: Wetland delineation criteria need to be based on the federal manual and regional supplement to align with Washington Administrative Code (WAC) 173-22-035. Wetland classifications should be based on the current 2014 Wetland Rating System for Western Washington (Ecology publication #14-06-029). Wetland buffer widths should be updated; there are multiple BAS-based Ecology guidance options for this update. Buffer modification options should be revised to limit allowances for buffer reductions. Mitigation sequencing requirements should be clarified to ensure that impact avoidance and minimization are analyzed ahead of mitigation design. Finally, the City should

consider how and when to allow use of off-site mitigation banking and in-lieu fee programs.

- Fish and Wildlife Habitat Conservation Areas, including streams: Stream regulations may be moved to a FWHCAs section for consistency with the WAC; provisions should be added for sensitive, threatened, and endangered terrestrial species and habitats. Stream classification should be updated; we recommend adopting the Permanent Water Typing System (WAC 222-16-030). Stream buffer widths, fencing/signage requirements, stream/buffer modification allowances, and mitigation requirements should all be updated to align with BAS. The City should review stream culvert provisions for consistency with WDFW design guidelines and to encourage stream daylighting.
- Frequently Flooded Areas: Frequently Flooded Areas are regulated, and floodplain habitat assessments are required under KMC 21.56 Flood Damage Prevention. Clarification of the relationship between terminology used in the KZC 90 (e.g., frequently flooded areas) and KMC 21.56 (e.g., areas of special flood hazard) should be considered.
- All Critical Areas – General Recommendations: The City should consider strengthening protective requirements and placing greater emphasis on mitigation sequencing (first avoid, then minimize, lastly mitigate). The City should further consider maximum development potential provisions relative to other density requirements in the City code. Reasonable use exceptions should be updated to add provisions for off-site mitigation. Bond requirements should be reviewed and revised to encourage compliance. Administrative provisions for appeals should be reviewed for clarity. We also recommend that the City provide more specific provisions for setbacks and nonconformance.

