

Draft Chapter 1
Critical Areas Assistance Handbook
Introduction - Reviewing and Updating
Critical Areas Protection Programs
4-2-18 draft

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- City of Selah Ordinance No. 2019 adopting the Selah GMA periodic update of the critical areas ordinance, June 27, 2017.
- City of Bellevue Resolution No. 9152 regarding completion of the required periodic update to City of Bellevue development regulations for consistency with the requirements of the Growth Management Act, October 12, 2016.
- City of Des Moines Ordinance No. 1649 amending the development regulations relating to the protection and regulation of environmentally critical areas to ensure compliance with the Washington State Growth Management Act, May 12, 2016.
- City of Edmonds Ordinance No. 4026 amending the critical areas regulations, May 3, 2016.

Recognizing the Value of Critical Areas Protection

Critical areas perform key functions that enhance our environment and protect us from hazards. The beneficial functions and values provided by critical areas include, but are not limited to, water quality protection and enhancement; fish and wildlife habitat; food chain support; flood storage, conveyance, and attenuation (the slow release) of flood waters; groundwater recharge and discharge; drinking water quality and quantity; erosion control; wave attenuation; protection from natural hazards; historical, archaeological, and aesthetic value protection; and recreation. Identifying the functions and values of local critical areas is essential to define the purpose of a critical areas protection program.

Each critical area performs different functions and each community assesses the values of the critical areas in their environment differently. Therefore, the purpose of protecting critical areas is unique for each community. Critical areas protection is essential to protect the public's health and safety, and can be used to comply with state and federal laws. Additionally, there are economic reasons to protect critical areas. Protection of drinking water quality and quantity supports sustainable growth. Critical areas support resource industries, such as salmon and shellfish harvesting. If the functions of critical areas are not protected now, attempting to restore them in the future is likely to be costly, if not impossible. For example, restoration of flood storage capacity. Failure to protect local populations of fish and wildlife can result in federal listings under the Endangered Species Act (ESA), which can bring significant constraints.

For every community, there are at least three reasons to protect critical areas:

- To protect the public from threats to human safety and to protect public and private property from natural hazards.
- To protect the environment and enhance the state's quality of life.
- To preserve those environmentally sensitive areas that are valuable to the public and provide ecological function.

Introduction

The purpose of this handbook is to help Washington communities review and, if needed, revise locally adopted programs for designating and protecting critical areas under the Growth Management Act (GMA). The Legislature amended GMA in 1997 to require counties and cities to periodically take action to review and, if needed, revise their comprehensive land use plan and development regulations to ensure that the plan and regulations are consistent with changes to statute since the last update.¹ Meeting the Best Available Science (BAS) requirement was challenging for many jurisdictions in the initial round of periodic updates that were due between 2004 through 2008.² Identifying the “best available science” and “including” that science in updated regulations often presented logistical and political challenges.

¹ RCW 36.70A.130.

² The original deadline of September 1, 2002, was extended in the 2002 session by the Legislature to a staggered schedule of every eight years. The Legislature amended the deadline again to reflect the current staggered schedule of 2015 – 2019, and every eight years thereafter.

Although not all counties and cities are fully planning under the GMA pursuant to RCW 36.70A.040, all counties and cities in the state are required to adopt development regulations to protect critical areas, and to periodically review them. While local governments have broad discretion in developing and amending comprehensive plans and development regulations tailored to local circumstances (including critical areas regulations), that discretion is bounded by the goals and requirements of the Growth Management Act.³

Each city and county in Washington State initially had the responsibility to perform the complex task to classify, designate, and protect those critical areas found in their local environment. Counties and cities planning under RCW 36.70A.040 were required to adopt development regulations to protect critical areas by September 1, 1991. All other counties and cities were required to adopt regulations by March 1, 1992.⁴ All counties and cities in the state have adopted critical areas regulations, and most have updated them at least once.

As local governments continue to work through periodic updates, the focus of this handbook is to help them identify any needed revisions to their critical areas regulations. This handbook, and guidance published by other state agencies, provide recommendations for local communities to consider when updating their critical areas regulations based on best available science. It provides additional recommendations for monitoring critical areas regulation implementation and effectiveness.

This handbook suggests multiple approaches to critical areas protection, including regulatory and non-regulatory methods. Protecting critical areas involves a variety of strategies, from the adoption of conservation policies in comprehensive plans, to the designation of appropriate land uses, zoning, and protection of open spaces. Subdivision codes are important in how communities plan for open space and plan for the retention of important natural landscape features. Critical areas regulations are important because they provide the administrative review and approval process for regulating land uses that may impact critical areas. Monitoring of the permit process for implementation and effectiveness can provide a feedback loop to assess and improve critical areas protection. While each local government uses unique approaches, they have a common interest in achieving no net loss of critical areas functions and values.

The suggestions in this handbook are not mandatory, for there is no single best approach to critical areas protection for all communities. Each city or county must decide which approaches to critical areas protection are appropriate to apply locally, consistent with the requirements of the GMA and the community's future vision. This handbook does not create any new standards or any new legal authority. The sole purpose is to provide a resource to local governments in reviewing and, if needed, revising their critical areas protection programs by discussing issues and presenting examples for consideration.

This handbook provides references to other resources and contacts to help jurisdictions identify potential sources of aid. Given the changing nature of regulations, natural resources, and scientific inquiry, the chapters of this handbook can be separately revised as needed to reflect new information and new requirements.

³ See *King County v. Central Puget Sound Growth Management Hearings Board*, 142 Wn.2d 543, 555-59 (2000) (King County II).

⁴ RCW 36.70A.060(2)

This handbook mostly addresses critical areas as defined by Washington’s Growth Management Act. Information about other state and federal regulations that may have different requirements applicable to critical areas is provided in **Chapter 4**. Chapter 7 applies to critical areas both under the GMA and the Shoreline Management Act (SMA).

Handbook Organization

This handbook is organized for ease of use by counties and cities that are updating local critical areas protection programs. Handbook topics are organized sequentially following a process a city or county might use when updating a critical areas protection program, starting with a review of best available science and management recommendations, and other policy considerations.

This chapter provides an overview of the requirements of the Growth Management Act, and provisions in Commerce guidance under the Washington Administrative Code (WAC).

Subsequent chapters and sections provide:

- Information about and links to state resources for reviewing and updating critical areas protection measures;
- Structuring critical areas regulations;
- Critical areas protection and other local land use regulations, and state and federal regulatory programs and requirements;
- Critical areas protection in natural resource lands
- Non-regulatory incentive programs; and
- Monitoring and adaptive management for permit implementation.

Commerce Administrative Code Updates

A table of WAC updates, including effective dates for ease of reference in determining changes since a county or city’s last update, is provided in Appendix 1.A. Commerce undertook a significant update of its WACs in 2010 to reflect statutory changes, case law, and important Growth Management Hearings Board decisions.

Court and Growth Management Hearings Board Decisions

The GMA affords local government significant discretion in how they achieve compliance. While this provides a significant degree of flexibility, it also creates a lack of certainty. In reviewing critical area protection programs for compliance, local governments are encouraged to review decisions made by the Growth Management Hearings Board and Washington State Courts. While Hearings Board decisions are not binding on jurisdictions not subject to a particular appeal, they provide guidance on how the Board may decide future appeals. Court of Appeals decisions are binding on jurisdictions within their district, and provide persuasive precedent for other jurisdictions. Supreme Court decisions are binding on all jurisdictions in the state. Local government consideration of court and hearings board decisions can help build defensible and effective critical area protection programs.

A summary of all court decisions, and a compilation of Growth Management Hearings Board digest summaries since 2005, that address critical areas protection are provided in Appendix 1.B. Full texts of court cases should be consulted.⁵ Hearings Board decisions and the Hearings Board digests may be obtained on the Hearings Board website at www.gmhb.wa.gov.

All of the court decisions relating to critical areas are summarized or referenced, as applicable, throughout the text of the Handbook. Several of the more important Growth Management Hearings Board case digest summaries are provided.

Example Critical Areas Protection Provisions

In addition to the information included in the handbook, examples of locally adopted ordinances and programs to designate and protect critical areas, including recently updated programs, [will be] posted on the Department of Commerce Growth Management Services [Critical Areas and Best Available Science web site](#). While these local examples are valuable references, your community may have conditions that need to be addressed differently depending on local environmental conditions and community values.

When to Update Your Critical Areas Program

The GMA requires that comprehensive land use plans and development regulations, including critical areas regulations, be subject to continuing review and evaluation by the county or city that adopted them. Counties and cities are required to take legislative action to review and, if needed, revise their comprehensive land use plans and development regulations to ensure the plans and regulations comply with the requirements of the GMA according to an eight-year cycle. However, changes are also recommended in response to changing local knowledge, advances in scientific or technical knowledge, and in response to findings from monitoring programs.

For the update schedule, and more detailed guidance on conducting a periodic review process, see [Keeping Your Comprehensive Plan and Development Regulations Current](#) (2016) on the Commerce website.

The Legislature provided an additional 12-month grace period for the completion of critical area ordinances for all jurisdictions. This means that if the periodic update is due in 2017, the review and any revisions to the plan and regulations must be complete by June 30th of that year for the jurisdiction to continue to be in compliance with the GMA. However, for the purposes of grants and loans, a jurisdiction would not be considered out of compliance until June 30th of 2018 if they had not completed the review and update of their critical areas ordinance.⁶

The level of review should depend on several common-sense factors. For example, if the jurisdiction contains significant, extensive, and/or inadequately protected critical areas, a more detailed review of its policies and development regulations may be necessary. If new sources of best available science are

⁵ Recent decisions by the Court of Appeals and the Supreme Court can be obtained through their [web site](#).

⁶ RCW 36.70A.130 (7)(b)

identified (including any management recommendations associated with the new science), the jurisdiction should review those updates for applicability to its critical areas regulations.

A well-documented record should support local governments' decision-making, including the facts relied upon, the analysis used, and the conclusions reached. The record should include a description of the review that was conducted, and the rationale for that review. Once adopted, the critical areas regulations should contain a "Findings of Fact" or other statement that documents this process. To assist local governments with this process, some examples of findings of fact are provided in Appendix 1.D. The examples provide different approaches to draft a good update process summary.

Steps to Review and Update a Critical Areas Protection Program

In reviewing and updating a critical areas program, the following steps are recommended:

- Consult your requirements for public participation in the review and update process. Counties and cities should follow their adopted public participation program⁷ that identifies procedures and schedules for the public to participate in the periodic update of their critical areas regulations.
- Consult the Commerce critical areas checklist⁸, and links to other state agency resources posted on Commerce critical areas web site, for any amendments to the GMA or Commerce WAC and any updates on best available science or agency management recommendations. **Commerce strongly recommends using the critical areas checklist in designing a work program to complete the periodic update.**
- After determining the scope of changes needed, counties and cities may elect to adopt an ordinance or resolution letting the public know early "what is on the table" as part of the update.
- Review any revisions for consistency with the comprehensive plan policies and land use designations, and for consistency with other development regulations. The land use element of comprehensive plans must include an assessment of stormwater pollution and provide approaches to reduce and mitigate such discharges. Managing stormwater discharges can be directly related to protecting critical areas.
- If the critical areas ordinance has been adopted by reference in the Shoreline Master Program (SMP), an update to the SMP will be required if your jurisdiction wants the critical area regulations to apply in shoreline jurisdiction. Jurisdictions may consider amending the SMP concurrently with critical area amendments. The joint review process under WAC 173-26-104 should help jurisdictions with a unified approach to amending the critical areas and shoreline master program.
- Consult with other jurisdictions in the watershed for consistency and any regional issues and approaches to consider.
- Consult with regional state agency staff while drafting decisions, including WDFW regional habitat biologists; Ecology regional wetlands specialists, flood program managers, and groundwater protection specialists; WDNR geology staff and aquatic program regional managers; and Department of Health Office of Drinking Water staff.⁹ Consultation early in the

⁷ As required by RCW 36.70A.140.

⁸ See the [Commerce Growth Management Critical Areas web page](#).

⁹ A complete list of state agencies with environmental expertise is provided in [WAC 197-11-920](#).

process is recommended to identify and address issues, thus avoiding “surprises” that can cause delays in adoption or possible appeals.

- If substantial revisions are being considered, think about convening a technical advisory committee that includes local experts such as natural resource program managers, tribes, Salmon Recovery Lead Entities¹⁰, Local Integrating Organizations for Puget Sound, water service suppliers, regional state agency technical staff, and any non-governmental entities working on habitat or species recovery or management.
- Take legislative action to adopt any revisions to the critical areas regulations and conclude that the periodic update of the critical areas regulations is complete. The ordinance or resolution:
 - Must be explicitly approved by the local government’s legislative body as having been completed in accordance with GMA update requirements (citing specifically to RCW 36.70A.130), both to comply with the statute and to set time and subject matter limits;
 - Should include findings that refer to any previous legislative actions that were part of the periodic update (e.g., resolutions adopting a public participation plan), and a finding that the jurisdiction has completed its periodic update requirement under the GMA; and
 - Should include findings that reference any sources of best available science and how the science was considered substantively in the development of any revisions to the regulations.
- Submit notice of intent to adopt to Commerce at least 60 days prior to adoption.¹¹
- Send a complete and accurate copy of the critical areas regulations to Commerce within ten days after final adoption.¹²

Growth Management Hearings Board Decisions

Futurewise and Pilchuck Audubon Society challenged Snohomish County’s update to its critical areas ordinance where there had been no new or recent GMA amendments, no substantive, relevant regulatory amendments, and no new best available science. The Central Puget Sound Growth Management Hearings Board rejected the petitioners’ interpretation of a Supreme Court decision regarding standing to challenge a county’s actions under GMA review and update requirements.¹³ However, the Board found that the County had clearly articulated the applicable law: “...where a regulation is wholly unchanged or is amended in a manner unrelated to the substance of the legal issue...and petitioner cites no changed science or GMA mandate, the challenge is time barred.” The Hearings Board went on to state:

...even though the Board rejects Petitioners’ interpretation of *Thurston County*, challenges to CAR amendments may be raised if the County failed to consider BAS in substantively amending the CARs. That is, if there has been “new”, more recent, science developed applicable to the

¹⁰ The [Governor’s Salmon Recovery Office and Recreation and Conservation Office website](#) provides links to the recovery plans, monitoring efforts, policies, and the [lead entity staff](#) that coordinate salmon recovery locally.

¹¹ RCW 36.70A.106(1). Some counties and cities combine this notice with their notice of determination under the State Environmental Policy Act.

¹² RCW 36.70A.106(2)

¹³ *Thurston County v. Western Washington Growth Management Hearings Board*, 164 Wn.2d 329 (2008).

protection of the functions and values of a particular critical area, an amended CAR would need to reflect consideration of same.¹⁴

In a previous case, the Central Board found that a specific restriction to the Board's scope of review arises when a party challenges a comprehensive plan or development regulation that has been "updated" in response to GMA planning cycles. The Supreme Court has ruled that the periodic updates required in the statute do not create an open season for challenges to previously-adopted provisions that are carried over into the new plan or code. Thus a party may challenge only new or amended plan and regulatory provisions in an update. Challenge to unchanged provisions is time-barred except where required by a recent GMA legislative amendment, new population forecast, or changed science concerning protection of critical area functions and values.¹⁵

However, the Central Board also previously found that the GMA requires that critical areas regulations be updated periodically, RCW 36.70A.130(3), and that cities "shall include" best available science in designating critical areas, RCW 36.70A.172(1). The Board noted that a city violated the GMA when it failed to include in its designation of geological hazard areas a great deal of new science it was aware of concerning the existence and location of surficial faults, and concerning the past occurrence and future risks of tsunamis and lahars.¹⁶

Growth Management Act Requirements to Protect Critical Areas

Local governments are required to do two things to comply with the GMA, designate critical areas and protect their functions and values. In doing so, they must include the best available science, and must give special consideration to anadromous fish.¹⁷ And, they should consider critical areas protection broadly by using a landscape scale approach to protecting ecosystem functions and values.

There are five types of critical areas identified in the GMA.¹⁸ They are:

- Wetlands
- Areas with a critical recharging effect on aquifers used for potable water
- Frequently flooded areas
- Geologically hazardous areas
- Fish and wildlife habitat conservation areas

¹⁴ *Futurewise, Pilchuck Audubon Society, and the Tulalip Tribes v. Snohomish County*, Case No. 15-3-0012c, FDO at 4 (February 17, 2017). Note: This summary is the author's as it provides more detail than the Growth Management Hearings Board digest. As of March 2018, the digest notes that an appeal of this decision is pending.

¹⁵ *John Postema v. Snohomish County*, Case No. 15-3-0011, FDO at pp 5-6 (April 8, 2016). Note: An appeal of this decision is pending.

¹⁶ *Seattle Audubon Society, et al v. City of Seattle*, 06-3-0024, FDO (12/11/06), at 19.

¹⁷ RCW 36.70A.172

¹⁸ See RCW 36.70A.030(5).

Designating Critical Areas

The Minimum Guidelines

The Legislature directed the Washington State Department of Community, Trade and Economic Development (now Commerce)¹⁹ in 1990 to develop minimum guidelines to assist counties and cities in classification of agricultural lands, forestlands, mineral resource lands and critical areas.²⁰ Chapter 365-190 WAC was adopted in 1991, and amended in 2010.²¹

The Minimum Guidelines are minimum requirements for critical areas classification and designation. The Guidelines reference the statutory requirement to include best available science, and recommend that counties and cities designate critical areas using maps and performance standards.²² Designation is usually done with a map such as a zoning map. However, there is not usually enough on-the-ground information to do an effective job of designating critical areas using this method. Critical areas designation is typically done through performance standards. The term “performance standards” means the criteria or characteristics of the land that determine that it is a critical area.²³

The adoption of performance standards provides a way to designate critical areas without requiring a prohibitively expensive inventory and mapping before the requirements for protecting the critical area would apply. Instead, the legislative act of designation is the adoption of criteria, or performance standards, that are used to determine a particular area is a critical area by applying the criteria on the ground. This typically happens during local project review. For example, the criteria may identify characteristics such as the presence of certain plant communities or the presence of hydric soils as performance standards indicating a wetland. Determining the exact location of the boundary only occurs through a delineation process during the site investigation associated with development. The National Wetlands Inventory map shows some but not all wetlands. The duty to protect wetlands exists regardless of whether a particular wetland is in on the National Wetland Inventory.

The Minimum Guidelines provide a process that local governments used when they first designated critical areas under the GMA.²⁴ Sources of best available science are included in the Guidelines, and in Chapter 2 of this Handbook.

The critical areas requirements in the GMA are closely related to many underlying public interests related to governmental costs and efficiency. The unwise development of critical areas, including lands or areas susceptible to natural hazards, may lead to inefficient use of limited public resources, jeopardize environmental resource functions and values, put species at risk of extinction and the regulatory burdens that listing triggers, subject persons and property to unsafe conditions, and affect the perceived quality of life. It is more costly to remedy the loss of critical areas functions and values than to conserve and protect them from loss or degradation. The inherent economic, ecological, social,

¹⁹ For purposes of this handbook, references to Commerce include the former Department of Community, Trade and Economic Development.

²⁰ RCW 36.70A.050

²¹ See Appendix 1.A for a table of amendments to Commerce WAC provisions related to critical areas with effective dates.

²² WAC 365-190-080(3) and (4)

²³ WAC 365-190-040(5), WAC 365-190-080(4)

²⁴ WAC 365-190-040

and cultural values of critical areas should be considered in the development of strategies designed to protect these lands.²⁵

In recognition of these common concerns, classification and designation of critical areas is intended to protect critical areas, and to preclude land uses and development which are incompatible with critical areas. When classifying, designating, and protecting critical areas, counties and cities should integrate regulatory and non-regulatory approaches together in a comprehensive program that relates to existing local, state, and federal efforts.²⁶ An integrated approach should also consider other applicable planning requirements, including the need to identify open space corridors in RCW [36.70A.160](#), and the need to include the best available science in policies and regulations protecting critical areas in RCW [36.70A.172](#).²⁷

Not all areas and ecosystems are critical for the same reasons. Some are critical because of the hazard they present to public health and safety, some because of the values they represent to the public welfare. In some cases, the risk posed to the public by use or development of a critical area can be mitigated or reduced by engineering or design; in other cases that risk cannot be effectively reduced except by avoidance of the critical area. Classification and designation of critical areas is intended to lead counties and cities to recognize the differences among these areas, and to develop appropriate regulatory and non-regulatory actions in response.²⁸

Precluding incompatible uses and development does not mean a prohibition of all uses or development. Rather, it means governing changes in land uses, new activities, or development that could adversely affect critical areas. For each type of critical area, counties and cities planning under the act should review and, if necessary, update their classification schemes and development regulations that govern changes in land uses and new activities.

Critical areas designation is an overlay of other land uses, including designated natural resource lands.²⁹ For example, if both critical area and natural resource land use designations apply to a given parcel or a portion of a parcel, both or all designations must be made.

Court and Growth Management Hearings Board Decisions

After Commerce adopted the Minimum Guidelines, there was some confusion as to whether or not the guidelines in Chapter 365-190 were mandatory. Subsequent court decisions have made it clear that the guidelines are, in fact, mandatory.

The Court of Appeals, Division 2, referred to the Minimum Guidelines as mandatory. “[T]he minimum guidelines require counties to map natural resource land”, citing WAC 365-190-040(2)(b)(vii).³⁰ The GMA sets forth objectives and minimum guidelines that local government must follow when classifying land.³¹

²⁵ WAC 365-190-020(2)

²⁶ Non-regulatory approaches are discussed in Chapter 6.

²⁷ WAC 365-190-020(3)

²⁸ WAC 365-190-020(4)

²⁹ WAC 365-190-020(6)

³⁰ *Manke Lumber Company v. Diehl*, 91 Wn. App. 793, 807 (1998).

³¹ *Id.* at 840.

The Supreme Court approved the Division 2 Court's approach of reliance on the Minimum Guidelines in 2006.³² Subsequently, the Division 2 Court stated, "Our Supreme Court has held that a county may designate a minimum parcel size for certain land type designations so long as the limitation is consistent with GMA and with [Commerce] principles...."³³ Since 2012, in keeping with the Supreme and appellate courts' clarifications, the Growth Management Hearings Board has held that counties and cities must follow the Minimum Guidelines.³⁴

In order to ensure a defensible critical areas protection program, the Commerce Minimum Guidelines should be considered mandatory and must be used to designate critical areas.

Protecting Critical Areas

There are two primary forms of critical areas protection – protection of functions and values, and protection of health and safety. They often apply at the same time.

Protecting Functions and Values

RCW 36.70A.172(1) requires counties and cities to protect the functions and values of critical areas. Although counties and cities may protect critical areas in different ways, or may allow some localized impacts to critical areas, or even the potential loss of some critical areas, development regulations must preserve the existing functions and values of critical areas. The Supreme Court found that a "no harm" standard provision in a county ordinance protected critical areas by maintaining existing conditions. The county's decision to not require mandatory riparian buffers in agricultural lands was upheld because doing so would impose a requirement to restore habitat functions that no longer existed. The GMA requirement to protect critical areas does not impose a corresponding requirement to enhance.³⁵ However, the GMA requires that critical areas regulations protect all functions and values of the designated areas.³⁶

The term "functions and values" refers to the core ecological processes performed by a particular critical area. Critical area functions contribute to the overall health of the ecosystem. Ecological functions of critical areas include flood attenuation, wildlife habitat, water quality, and groundwater recharge. Once a wetland has been identified, one must determine what functions need to be protected, and what is required to do protect them. For example, the width of the wetland buffer is determined by the habitat

³² *Lewis County v. Western Washington Hearings Board*, 157 Wn.2d 488, 501 (2006).

³³ *Clark County v. WWGMHB*, 161 Wn.App. 204, 232, 254 P.3d 862 (2011): rev' granted 172 Wn.2d 1006, 259 P.3d 1108 (Sep. 6, 2011): "... the regulation actually *requires* counties to consider the 10 factors."

³⁴ See *Friends of Pierce County, et al. v. Pierce County*, GMHB No. 12-3-0002c, FDO at 31 (July 9, 2012); *Futurewise, Pilchuck Audubon Society*; and the *Tulalip Tribes v. Snohomish County*, Case No. 15-3-0012c, FDO at 17 (February 17, 2017).

³⁵ *Swinomish Indian Tribal Community v. Western Washington Growth Management Hearings Board*, 161 Wn.2d 415 (2007).

³⁶ *Yakima County v. Eastern Washington Growth Management Hearings Board*, 168 Wn. App. 680 (2012); and *Whidbey Environmental Action Network v. Island County*, 122 Wn. App. 156, 93 P.3d 885 (June 7, 2004), review denied, 153 Wn.2d 1025 (2005).

and water quality values associated with the wetland, or the amount of separation required to reduce pollution in stormwater runoff going into the wetland.

Protecting Health and Safety

“Protection” in the context of critical areas under the GMA means preservation of the functions and values of the natural environment, or to safeguard the public from hazards to health and safety.³⁷ Approaches to protection of the functions and values of critical areas will vary with the type of critical area. Functions and values of wetlands and fish and wildlife habitat conservation areas usually involve some sort of vegetative buffer to protect water quality, manage flow during storm events, and protect habitat. Protection of critical aquifer recharge areas typically requires protection from spills and polluting runoff. Protection of geologically hazardous areas is about reducing risk to life and property from events such as landslides, tsunamis, and volcanic eruptions. While protecting frequently flooded areas involves protecting both floodplain and habitat function, it also protects life and property from flood events.

Growth Management Hearings Board Decisions

The Western Washington Growth Management Hearings Board views the GMA as effectively establishing two categories of critical areas – those areas whose functions and values are protected for the beneficial services they provide (i.e. Wetlands, FWHCAs, Aquifer Recharge Areas) and those areas for which protection is needed due to the threat these areas pose to persons and property (i.e. Frequently Flooded Areas, Geologically Hazardous Areas).³⁸

The Central Puget Sound Growth Management Hearings Board addressed the question of what land use regulations are required, once a hazard is acknowledged. The Board agreed with Pierce County that land use policy and responsibility with respect to Mount Rainier Case II lahars – “low probability, high consequence” events – is within the discretion of the elected officials; they bear the burden of deciding “How many people is it okay to sacrifice.”³⁹

Mitigation Sequencing and Compensatory Mitigation

If a project proponent is proposing to impact a critical area, the critical areas regulations should require them to show that they have first avoided and minimized impacts wherever practicable. Mitigation sequencing should be applied to show avoidance and minimization of impacts. Mitigation sequencing includes:

1. **Avoiding the impact** altogether by not taking a certain action or parts of an action;
2. **Minimizing impacts** by limiting the degree or magnitude of the action and its implementation, by using appropriate technology, or by taking affirmative steps to avoid or reduce impacts;

³⁷ WAC 365-196-830(3)

³⁸ *OSF/CPCA v. Jefferson County*, Case No. 08-2-0029c, FDO, at 27 (Nov. 19, 2008).

³⁹ *Tahoma Audubon Society, et al v. Pierce County*, 05-3-0004c, Final Decision and Order, July 12, 2005, at 23 – 25.

3. **Rectifying the impact** by repairing, rehabilitating, or restoring the affected environment;
4. **Reducing or eliminating the impact over time** by preservation and maintenance operations during the life of the action;
5. **Compensating for the impact** by replacing, enhancing, or providing substitute resources or environments; and/or
6. **Monitoring the impact** and taking appropriate corrective measures.

Mitigation sequencing should be applied first (starting with avoidance through minimization, rectification, reduction or elimination over time) before determining whether compensatory mitigation is appropriate. Commerce’s Procedural Criteria provide that, if development regulations allow harm to critical areas (step 5 above), they must require compensatory mitigation of the harm. Development regulations may not allow a net loss of the functions and values of the ecosystem that includes the impacted or lost critical areas.⁴⁰

Given the requirement to protect the functions and values of critical areas, compensatory mitigation should only be used after mitigation sequencing and it should be allowed with caution. Before allowing compensatory mitigation, a local government will need to determine that there is the ability to replace the functions and values through compensatory mitigation. Compensatory mitigation is specifically called out in the Minimum Guidelines as it applies to wetlands⁴¹, and to geologically hazardous areas⁴². The WAC is silent with respect to the three other types of critical areas. For some types of critical areas or for some types of impacts, compensation may not be possible. When compensatory mitigation is not possible, harm to the critical area from development activity must be avoided.

Compensatory mitigation is used to offset the unavoidable impacts to critical areas by replacing the functions and values lost when a critical area is impacted. Examples of compensatory mitigation include mitigation ratios, debit-credit tools, mitigation banks, in-lieu fee programs, and off-site mitigation. For more information on examples of compensatory mitigation for wetlands impacts, see Ecology’s [Wetlands Guidance for CAO Updates](#), Eastern and Western Washington Versions (2016), pp. 13 – 16.

The Western Washington Growth Management Hearings Board clarified the difference between mitigation sequencing and compensatory mitigation:

“Mitigation” and “mitigation sequencing” are not always clearly understood. Those terms are easily confused with “compensatory mitigation”. The latter is the step in the mitigation sequence that occurs after avoidance and minimization. It involves restoring (re-establishing, rehabilitating), creating (establishing), enhancing, or preserving wetlands to replace those lost or degraded through permitted activities. “Mitigation” and “mitigation sequencing” have a broader meaning: they include as the first option, avoidance of any impact. If avoidance is not possible, the second step in mitigation sequencing is minimization. Only after those first steps does one then consider compensatory mitigation.⁴³

⁴⁰ WAC 365-196-830

⁴¹ WAC 365-190-090(2)(d)(v)

⁴² WAC 365-190-120(2)

⁴³ *Friends of the San Juans, P.J. Taggares Company, Common Sense Alliance, William H. Wright, and San Juan Builders Association v. San Juan County*, 13-2-0012c, Order Finding Compliance, p. 1, May 14, 2015.

No Net Loss

With protection of critical areas, it is important to understand that protection does not mean that critical areas will not be impacted. Rather, impacts to high-quality critical areas should be prohibited except in limited circumstances. Impacts to other critical areas must be avoided and minimized under the mitigation sequence. When impacts cannot be avoided, new development must replace the lost functions and values through compensatory mitigation.

WAC 365-196-830(4) provides:

Although counties and cities may protect critical areas in different ways or may allow some localized impacts to critical areas, or even the potential loss of some critical areas, development regulations must preserve the existing functions and values of critical areas. If development regulations allow harm to critical areas, they must require compensatory mitigation of the harm. Development regulations may not allow a net loss of the functions and values of the ecosystem that includes the impacted or lost critical areas.

For critical areas regulated under the Shoreline Management Act (RCW 90.58.020), local shoreline master programs must include policies and regulations designed to achieve no net loss of ecological functions.⁴⁴

An Ecosystem Approach

The Western Washington and Central Puget Sound Growth Management Hearings Boards have found that, under the statutory definition of “critical areas”⁴⁵, counties and cities must protect “areas and ecosystems”. In these decisions, the Boards found that development regulations may not allow a net loss of the functions and values of the ecosystem that includes the impacted or lost critical areas.⁴⁶

Functions and values must be evaluated at a scale appropriate to the function being evaluated. Commerce’s Procedural Criteria recommends protection at the ecosystem scale. Functions are the conditions and processes that support an ecosystem. Conditions and processes operate on varying geographic scales ranging from site-specific to watershed and even regional scales. Some critical areas, such as wetlands and fish and wildlife habitat conservation areas, may constitute ecosystems or parts of ecosystems that transcend the boundaries of individual parcels and jurisdictions, so that protection of their function, and values should be considered on a larger scale.⁴⁷ This is often true for salmon habitat.

⁴⁴ WAC 173-26-186(8)(b) and 201(2)(e)(i)

⁴⁵ RCW 36.70A.020(5).

⁴⁶ *Whidbey Environmental Action Network v. Island County*, 14-2-0009, Final Decision and Order, June 26, 2015; *Ann Aagaard, Judy Fisher, Bob Fisher, Glen Conley, and Save a Valuable Environment (SAVE) v. City of Bothell*, 15-3-0001, Final Decision and Order, July 21, 2015.

⁴⁷ WAC 365-196-830(6)

Best Available Science

In 1995, the Washington State Legislature added a new section to the GMA to ensure that counties and cities include reliable scientific information when adopting policies and development regulations to designate and protect critical areas. RCW 36.70A.172 requires all counties and cities in Washington to “include the best available science in developing policies and development regulations to protect the functions and values of critical areas.”

The Legislature considered this requirement an important step towards regulatory reform and making timely project permitting decisions. Local governments’ understanding of where on the landscape critical areas occur, how they naturally function, and how best to regulate land uses that may impact them is important in ensuring that zoning and project permit decisions are being made without the need to complete expensive environmental review and new studies at the permit level. Good upfront planning and the adoption of scientifically defensible development standards should lead to quicker permit decisions.

While science is not the sole criterion to be used in developing critical areas policies and regulations, the Legislature singled out science for special mention. Rather than imposing any particular statewide standard, the Legislature opted to defer to local decision making when determining how to “include” the best available science.

The objective of including science is “to protect the functions and values of critical areas.” Science plays a central role in delineating critical areas, identifying functions and values, and recommending strategies to protect their functions and values. Scientifically valid information should help with an evaluation and discussion of the applicability, relevance, and limitation, if any, of the science that is contained in the record. Following enactment of RCW 36.70A.172, science-based recommendations cannot simply be disregarded in favor of competing considerations. Informed decision making requires that decision makers receive scientific information that has not been filtered through screens of competing interests.

For hazard-related critical areas, such as geologically hazardous or frequently flooded areas, the purpose of including best available science is to ensure that planning and decision-making (public and private) is informed by and consistent with the most complete understanding available of the extent and magnitude of natural hazards. This information changes frequently as data improves, and updates that increase or decrease the risk to an area should in turn trigger consideration of updates in the appropriate regulations, codes, and plans.

What Constitutes the Best Available Science?

Local governments must identify, collect, and assess the available scientific information relating to the protection of critical areas within their jurisdiction, and then determine which of that science constitutes the “best available science.” Local governments may accept or solicit scientific information from state and federal agencies, universities, tribes, subject matter experts, Salmon Recovery lead entities and Puget Sound Local Integrating Organization technical committees, and others. But the burden ultimately is on the local government to determine whether the scientific information assembled in fact constitutes the best available science.

With respect to the availability of science, the Western Washington Growth Management Hearings Board found that the best available science is science that is presently available as well as practically and economically feasible.⁴⁸ The Central Puget Sound Growth Management Hearings Board reasoned “that the “best available science” requirement includes the word “available” as an indicator that a jurisdiction is not required to sponsor independent research but may rely on competent science that is provided from other sources. . . .”⁴⁹

In September 1998, Commerce convened a technical team comprised of planners and scientists from state agencies and local governments to address the uncertainties regarding the inclusion of the “best available science” for critical areas designation and protection. Building on the work of the technical team, and following an extensive public dialog, Commerce adopted six new sections to the Procedural Criteria, Part Nine, WAC 365-195. The best available science rules are codified at [WAC 365-195-900 through 925](#) and took effect August 27, 2000.

What Does It Mean to “Include” the Best Available Science?

In order to demonstrate that the best available science has been “included” in the development of critical areas policies and regulations, a local government’s record should provide a rationale connecting the criteria in the ordinance used for designation and protection to the documented functions and values of critical areas known or potentially existing within the jurisdiction. The local government’s record supporting adoption of those policies and regulations should include the following:

- The specific policies and regulations adopted to protect the functions and values of critical areas.
- Copies of (or references to) the best available science used in the decision making.
- The nonscientific information used as a basis for departing from science-based recommendations.
- The rationale supporting the local government’s reliance on the identified nonscientific information.
- Actions taken to address potential risks to the functions and values of the critical areas the policies and regulations are intended to protect.⁵⁰

Court and Growth Management Hearings Board Decisions

Local governments must substantively consider the best available science when adopting policies and development regulations to designate or protect critical areas. Several court decisions have addressed this. The Division II Court of Appeals held that evidence of the best available science must be included in the record and must be considered substantively in the development of critical areas policies and regulations.⁵¹

⁴⁸ *WEAN/CARE v. Island County*, 08-2-0026c, Order on Reconsideration, December 22, 2008.

⁴⁹ *Hood Canal Environmental Council, et al v. Kitsap County*, 06-3-0012c, FDO (8/28/06), at 30.

⁵⁰ WAC 365-195-915

⁵¹ *Whidbey Environmental Action Network v. Island County*, 122 Wn. App. 156, 93 P.3d 885 (June 7, 2004), review denied, 153 Wn.2d 1025 (2005).

The Division III Court of Appeals held in 2014 that a county must indicate in the record that best available science was included or analyzed with a reasoned process. Mere inclusion of best available science in the record is not sufficient. The written record must “show the work” of the county or city, and explain how best available science was considered substantively in the development of the critical areas regulations.⁵²

In a 2005 decision⁵³, the Supreme Court found that the record must demonstrate that the County used scientific information and analyzed that information using a reasoned process. The Court appeared to have used a two-part test to assess a county’s compliance with the best available science requirement:

- (1) The County must rely on scientific information—the BAS requirement does not mandate the use of a particular methodology, but it requires at a minimum the use of a scientific methodology; and
- (2) The steps taken in analyzing the scientific information must constitute a reasoned process, with the process evident in the record.

Quoting from a 2000 Western Washington Growth Management Hearings Board decision, the Supreme Court suggested it is not a reasoned process for a county to “choose its own science over all other science” or “use outdated science to support its choice.”

However, in 2012 the Division II Court of Appeals held that “including” BAS does not impose a duty on local governments to describe each step of their deliberative process but rather the local government is required to address on the record the relevant sources of BAS included in their decision-making.⁵⁴

The Division III Court of Appeals held that a county had failed to include the best available science in designating critical habitats, as required by RCW 36.70A.172(1). The county only designated as critical wildlife habitat areas that had been designated by a state or federal agency process as habitat for endangered, threatened, or sensitive species. The court ruled that, by tying the classification of critical habitat to lands designated by another state or federal agency, the county had avoided consideration of any scientific information. Instead, counties must use some kind of scientific methodology in a reasoned process of analysis to designate the critical habitats.⁵⁵

Departing from the Best Available Science

In general, local governments must take actions to protect critical areas based on best available science. In departing from actions supported by best available science, caution should be exercised. Local governments should only depart from best available science if it is necessary to balance competing goals of the GMA. Even then, the adopted policies and regulations must still protect the functions and values of critical areas.

⁵² *Ferry County v. Growth Management Hearings Board*, 184 Wn. App. 685, 339 P.3d 478 (2014).

⁵³ *Ferry County v. Concerned Friends of Ferry County*, 155 Wn.2d 824, 123 P.3d 102 (Nov. 17, 2005).

⁵⁴ *Olympic Stewardship Foundation v. Western Washington Growth Management Hearings Board*, 166 Wn. App. 172 (2012), review denied, 174 Wn.2d 1007 (2012).

⁵⁵ *Stevens County v. Futurewise*, 146 Wn. App. 493 (2008), review denied, 165 Wn.2d 1038 (2009).

- If you are considering an approach to protecting critical areas that is not supported by best available science, you must demonstrate how the alternative approach will protect the functions and values of critical areas. Specifically, in departing from BAS a local government should: Identify the information in the record that supports its decision to depart from science-based recommendations;
- Explain its rationale for departing from science-based recommendations; and
- Identify potential risks to the functions and values of the critical area or areas at issue and any additional measures chosen to limit such risks. State Environmental Policy Act (SEPA) review often provides an opportunity to establish and publish the record of this assessment.⁵⁶

Court and Growth Management Hearings Board Decisions

The Division II Court of Appeals held that if a city or county adopts a critical areas requirement that is outside the range supported by the best available science, it must provide findings explaining the reasons for its departure from the best available science and identifying the other GMA goals being implemented by that departure.⁵⁷

Regarding the availability of science, the Division II Court of Appeals found the GMA requires local governments to use best *available* science. The court recognized that the best science that is available may include science that is “immature” or not fully developed. The court upheld the Growth Management Hearings Board finding that the GMA required including the best science that was available. The proper remedy for addressing the problem of science that was not fully developed was the requirement in the GMA for periodic updates, rather than rejection of the available but not fully developed science.⁵⁸

The Division II Court also found that, to the extent a county or city relies on a previously-adopted ordinance to protect critical areas, that prior ordinance may be challenged for compliance with the GMA’s best available science requirements. The County relied partly on a six-year-old wetlands ordinance to protect fish and wildlife habitat conservation areas. The Court agreed that the BAS requirement does not operate retroactively, but it explained that critical areas regulations adopted before the BAS requirement was enacted were subject to challenge to the extent the County relied on them to fulfill the obligations imposed by the BAS requirement. “Otherwise, a county could use myriad preexisting regulations in an attempt to satisfy GMA critical areas requirements without actually having to include BAS analysis. This would contravene RCW 36.70A.172.”⁵⁹ However, in this case, the Court found the County did not rely substantively on the earlier wetlands buffers to protect fish and wildlife habitat, and it reversed the Board’s invalidation of the wetlands buffers.⁶⁰

⁵⁶ WAC 365-195-915(1)(c)

⁵⁷ *Whidbey Environmental Action Network v. Island County*, 122 Wn. App. 156, 93 P.3d 885 (June 7, 2004), review denied, 153 Wn.2d 1025 (2005).

⁵⁸ *Kitsap Alliance of Property Owners v. Central Puget Sound Growth Management Hearings Board*, 160 Wash. App. 250 (2011)

⁵⁹ *Id.* at 180. The language and holding in this portion of the decision was modified from the previous decision withdrawn by the Court.

⁶⁰ Note, this was not a challenge to an update under RCW 36.70A.130 of the county’s critical areas ordinance.

In the same decision, the Division II Court found that, if a city or county adopts a critical areas requirement that is outside the range supported by the best available science, it must provide findings explaining the reasons for its departure from the best available science and identifying the other GMA goals being implemented by that departure.⁶¹

The Division III Court of Appeals found that a county failed to comply with the GMA when it departed from or ignored the recommendation of WDFW to designate habitat for endangered, threatened and sensitive species or designate species of local importance. The court also found that the county failed to provide a reasoned justification for departing from best available science. When departing from best available science, the county must “show its work” and include the analysis in the record. In the absence of scientific information, the county should adopt a precautionary or no risk approach.⁶²

The Supreme Court held that a county did not include best available science when it adopted standard buffers and adjusted minimum stream and wetland buffers. The Court found that the adopted buffers did not protect all functions for either streams or wetlands because almost all of the scientific studies reviewed by the county recommended buffers greater than those that were adopted. However, the court also found that the County had provided reasoned justification for not regulating ephemeral streams as critical areas.⁶³

The Supreme Court also held that the GMA doesn’t require local governments to always follow best available science. Here the court stated that the county was required to “include” best available science in the record and departures from best available science would be permitted where the county provided a reasoned justification for the departure. A tribe challenged the county’s critical areas ordinance for failing to require mandatory riparian buffers. The court concluded the county is not required to enhance critical areas but could protect critical areas by maintaining existing conditions. The county’s decision to not require mandatory riparian buffers was a justified departure from best available science because doing so would impose a requirement to restore habitat functions that no longer existed. The GMA requirement to protect critical areas does not impose a corresponding requirement to enhance.⁶⁴

Addressing Inadequate Scientific Information

In developing critical area protection programs, local governments are likely to encounter situations where no applicable scientific information exists, or where the existing scientific information does not provides insufficient certainty or direction on how to protect critical areas. In such situations, local government should consider a precautionary or no risk approach. The basic concept behind a no risk approach is that actions that cannot later be “undone”, and which may harm critical area, are prohibited until the uncertainty is resolved through scientific or technological advances⁶⁵. A no risk approach may require that limits be placed on development and land use activities.

⁶¹ *Whidbey Environmental Action Network v. Island County*, 122 Wn. App. 156, 93 P.3d 885 (June 7, 2004), review denied, 153 Wn.2d 1025 (2005).

⁶² *Ferry County v. Growth Management Hearings Board*, 184 Wn. App. 685, 339 P.3d 478 (2014)

⁶³ *Yakima County v. Eastern Washington Growth Management Hearings Board*, 168 Wn. App. 680 (2012).

⁶⁴ *Swinomish Indian Tribal Community. v. Western Washington Growth Management Hearings Board*, 161 Wn.2d 415 (2007).

⁶⁵ WAC 365-195-920(1).

An adaptive management program is another approach to addressing a lack of adequate scientific information. Adaptive management programs rely on scientific methods to evaluate how well regulatory and non-regulatory actions are achieving their objectives. Under an adaptive management program management, policy, and regulatory actions are experimental. These actions are then purposefully monitored to evaluate their effectiveness. Based on the results of the monitoring program, changes may be necessary to ensure effective critical areas protection.⁶⁶

An adaptive management program is a formal and deliberate scientific approach to taking action and obtaining information in the face of uncertainty. To implement an adaptive management program effectively, counties and cities should be willing to:

- (a) Address funding for the research component of the adaptive management program;
- (b) Change course based on the results and interpretation of new information that resolves uncertainties; and
- (c) Commit to the appropriate time frame and scale necessary to reliably evaluate regulatory and non-regulatory actions affecting critical areas protection and anadromous fisheries.⁶⁷

Court and Growth Management Hearings Board Decisions

The Western Washington Hearings Board found that, when a less than cautionary approach is chosen for protection, that approach requires monitoring and adaptive management. In one case, that approach was found to require an effective monitoring and adaptive management program that relies on scientific methods to evaluate how well regulatory and non-regulatory actions adopted by the county achieve their objectives.⁶⁸

In another case, a county which had considered the best available science and adopted less stringent protection standards that balance the need for protection of potable water supplies against the chilling effect of regulation against development, was found by the Western Board to have complied with the GMA only if the county also adopted a monitoring strategy that includes stricter development regulations that will be implemented at once if the less stringent protection standards prove to be inadequate to protect against seawater intrusion.⁶⁹

The Western Board also held that because the City has adopted precautionary measures based on best available science to protect wetlands, the Board did not need to reach the issue of whether its adaptive management problem complied with RCW 36.70A.172.⁷⁰

⁶⁶ WAC 365-195-920(2)

⁶⁷ WAC 365-195-920(2)(a) – (c)

⁶⁸ *Swinomish Indian Tribal Community et al. v. Skagit County*, 2-2-0012c (Compliance Order, 12-8-03)

⁶⁹ *Olympic Environmental Council, et al. v. Jefferson County*, 01-2-0015 (Compliance Order, 12-4-02).

⁷⁰ *Evergreen Islands/Futurewise, et al v. Anacortes*, Case No. 05-2-0016, (Compliance Order, at 5, 4-09-07).

Updates to Include New Science

As previously noted, the Central Puget Sound Growth Management Hearings Board found that the GMA requires that critical areas regulations be updated periodically, RCW 36.70A.130(3), and that cities “shall include” best available science in designating critical areas, RCW 36.70A.172(1). The Board noted that a city violated the GMA when it failed to include in its designation of geologically hazardous areas a great deal of new science.⁷¹

Providing a Constitutional Nexus

Compliance with the best available science requirement may be necessary to satisfy constitutional nexus and proportionality requirements per the earliest court decision regarding best available science. The Division II Court of Appeals suggested in dictum⁷² that the best available science requirement may have constitutional ramifications with respect to the nexus and rough proportionality limits the United States Supreme Court has placed on governmental authority to impose conditions on development applications.⁷³

Special Consideration for Anadromous Fish

When developing policies and regulations to designate and protect critical areas, local governments must give special consideration to measures necessary to preserve or enhance anadromous fisheries. WDFW defines “anadromous fish” as a fish that is born in fresh water, spends much of its life in the sea, and returns to fresh water to spawn. While most Pacific salmonids die after their first spawning, adult char (e.g., bull trout), cutthroat trout and steelhead can live for many years, moving in and out of saltwater and spawning each year. The life history of Pacific salmonids contains critical periods of time when these fish are more susceptible to environmental and physical damage than at other times.⁷⁴

The requirement to focus on protection measures for anadromous fish is in addition to the requirement to include the best available science. WAC 365-195-925 explains what it means to give “special consideration” to the protection of anadromous fisheries:

- The county or city should take the same steps it takes to demonstrate it has included the best available science. It should make a record showing that its critical areas policies and regulations identify and address “conservation or protection measures necessary to preserve or enhance anadromous fisheries” that are grounded in the best available science.
- The “conservation or protection measures” for anadromous fisheries should include measures that preserve or enhance habitat for all life stages of anadromous fish.
- The life stages of anadromous fish can be tied to the following general habitat requirements:
 - Adequate but not excessive stream flows.

⁷¹ *Seattle Audubon Society, et al v. City of Seattle*, 06-3-0024, FDO (12/11/06), at 19.

⁷² “Dictum”, or “dicta” in the plural form, is a legal term for opinions of a judge that do not embody the determination of the court. Because they go beyond the facts before the court, they are the individual views of the opinion’s author and are not binding as legal precedent.

⁷³ *Honesty in Environmental Analysis & Legislation (HEAL) v. Central Puget Sound Growth Management Hearings Board*, 96 Wn. App. 522, 979 P.2d 864 (June 21, 1999) (amended Aug. 25, 1999).

⁷⁴ [Land Use Planning for Salmon, Steelhead and Trout: A Land Use Planner’s Guide to Salmonid Habitat Protection and Recovery](#), WDFW, October 2009.

- Cool, well-oxygenated, unpolluted water.
- Streambed gravels that are relatively free of fine sediments.
- Instream structural diversity (interposed pools, riffles, hiding and resting cover).
- Unimpeded migratory access to and from spawning and rearing areas.
- Complex estuarine and nearshore habitats that support food production, migratory cover, and physiological transition between fresh and salt water.

These habitat requirements and life cycle needs should be given special consideration when developing critical area protection programs. This can be done many different ways, including ensuring riparian corridors and vegetation management along shorelines are preserved to help provide large woody debris for structural diversity, lower water temperature, nutrient input, pollutant inputs and shoreline stabilization. Flood hazard mitigation is important, as well as groundwater discharge, to ensure adequate but not excessive stream flows for anadromous fish.

Methods to protect water quality and ensure that there is cool, well-oxygenated, unpolluted water should be taken into consideration. This can include development strategies that minimize soil compaction and impervious cover, and retain native vegetation. Erosion control and stormwater management are needed to keep fine sediments and other pollutants from entering the stream and reducing spawning gravel quality or harming aquatic invertebrates utilized as food sources. Maintenance and protection of wetlands is important for preserving adequate water recharge to streams during low flow periods, as well as important habitat for amphibious species and insects that are potential food sources for fish.

Commerce notes in the Procedural Criteria that a regional approach is especially important when giving special consideration to conservation or protection measures necessary to preserve or enhance anadromous fisheries.⁷⁵ A regional approach recognizes that ecosystems and the fish that rely on them cross jurisdictional boundaries.

Court and Growth Management Hearings Board Decisions

The Supreme Court addressed the question of whether enhancement of natural conditions under the GMA is required. The Court stated:

The legislature has also recognized that “protect” has a different meaning than “enhance.” In several sections of the GMA, the legislature allows enhancement of natural conditions under the GMA without requiring enhancement. For example, RCW 36.70A.172(1) requires counties to “give special consideration to protection measures necessary to preserve or enhance anadromous fisheries.” This statute clearly gives counties a choice between preserving “or” enhancing. Furthermore, the requirement is to give “special consideration to” such measures, not necessarily to adopt them. See WAC 365-195-925(2) (a county must include “in the record” evidence of special consideration to comply with RCW 36.70A.172(1)). Another statute, RCW 36.70A.020(10), lists as a goal of the GMA to “enhance the state’s high quality of life, including air and water quality.” However, the GMA allows counties to decide how to achieve the goal of enhancing water quality without specifically requiring enhancement of a damaged fish habitat. In our judgment, water quality and fish habitat are related, but they are not the same. A duty to

⁷⁵ WAC 365-196-830(7)

enhance the quality of water is not a duty to enhance fish habitat. A third example is RCW 36.70A.460. It recognizes that under chapter 77.55 RCW, fish habitat enhancement projects that meet certain criteria are entitled to a streamlined permitting process. Nothing in that chapter, however, requires a county to undertake such projects. See RCW 77.55.181.

As the foregoing illustrates, the legislature has not imposed a duty on local governments to enhance critical areas, although it does permit it. Without firm instruction from the legislature to require enhancement of critical areas, we will not impose such a duty. Therefore, to the extent that the Tribe argues that the GMA places a higher burden upon the county than the duty to prevent new harm to critical areas, we disagree. The “no harm” standard, in short, protects critical areas by maintaining existing conditions.⁷⁶

The Central Puget Sound Growth Management Hearings Board reviewed Pierce County’s detailed scientific evidence in the record regarding salmon habitat along marine shorelines to determine whether the County gave “special consideration to anadromous fish.” The Hearings Board found that:

Despite the detailed information about the function and values of salmonids habitat specific to each shoreline reach, Pierce County eliminated “marine shorelines” from the fish and wildlife habitat conservation areas listed in its critical areas ordinance without determining whether the remaining designated critical areas adequately met the needs of salmon.⁷⁷

Deferring salmon habitat protection to a site-by-site analysis based on disaggregated factors is inconsistent with Pierce County’s best available science. Nothing in the science amassed by the County supports disaggregating the values and functions of marine shorelines.⁷⁸

The Board finds that Pierce County’s site-by-site assessment of marine shorelines during the permit application process, as established in (the CAO), does not meet the requirement of using best available science to devise regulations protective of the integrated functions and values of marine shorelines as critical salmon habitat.⁷⁹

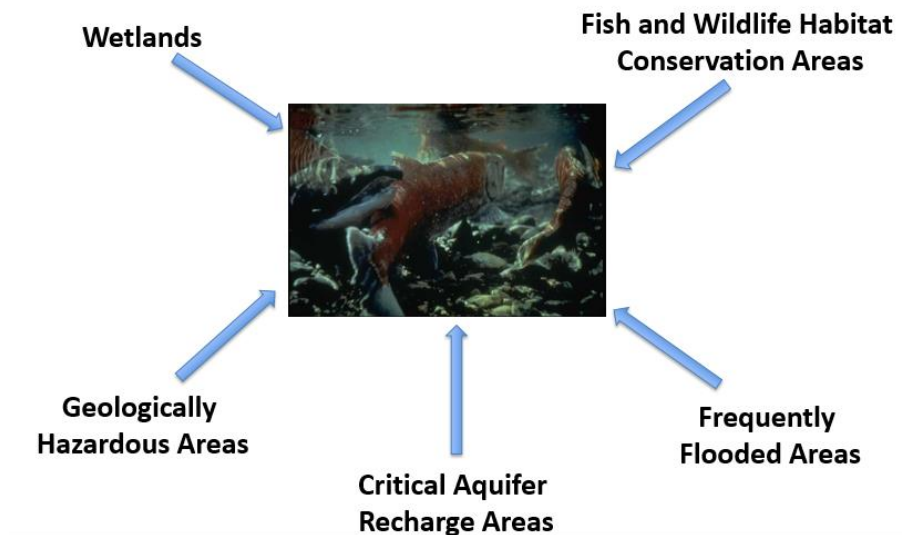
⁷⁶ *Swinomish Indian Tribal Community v. Western Washington Growth Management Hearings Board*, 161 Wn.2d 415 (2007).

⁷⁷ *Tahoma Audubon Society, et al v. Pierce County*, 05-3-0004c, FDO July 12, 2005, at 38-40.

⁷⁸ *Id.*, at 40.

⁷⁹ *Id.*, at 40 – 41.

Special Consideration of Anadromous Fisheries in the Context of the Five Types of Critical Areas



Each type of critical area defined under the GMA either provides critical habitat or has the potential for contributing to habitat conditions needed to conserve or protect of anadromous fisheries. For example:

- **Wetlands** and their buffers store floodwater, recharge groundwater, remove pollutants and excess nutrients, and provide habitat for a large number of plants and animals.
- **Fish and wildlife habitat conservation areas**, including wetland buffers and riparian management zones, provide continuous vegetated riparian areas that are key to functioning salmonid habitat.
- **Frequently flooded areas** protection addresses flooding that can directly impact salmonid habitat quality and availability. Restoring floodplain connectivity improves off-channel rearing habitat vital for young salmonids (smolts). Flood control levees often channelize flood flows that can lead to channel erosion and high turbidity from high velocity flows. Floodplains are also hydrologically connected to adjacent streams, rivers, and wetlands. Impervious surface coverage, vegetation removal, and other alterations can affect water quality, stream flows, and other ecosystem functions vital to salmon habitat.
- **Geologically hazardous areas** may affect salmonids in a variety of ways. Steep slopes along shorelines can include feeder bluffs that benefit salmon habitat. While erosion and mass wasting slide events that occur naturally can block streams or overload them with sediment in the short term, the focus should be on maintaining natural sediment loads and ecosystem functions. Seismic events can cause built objects to fall into streams, including pollutants such as chemicals and spilled fuels.
- **Critical aquifer recharge areas** contribute to groundwater quality and in-stream flow. While critical aquifer recharge areas are designated and protected to ensure availability of potable water, the groundwater resource also interacts with streams. Both discharge and recharge areas help to cool summer daytime temperatures and provide year round habitat for invertebrates,

and important salmonid food source. Protecting aquifer recharge areas from stormwater pollution helps protect water quality for salmonids.

It should be noted that groundwater falls within the definition of “waters of the state” and must therefore be considered in designating fish and wildlife habitat conservation areas (WAC 365-190-130(2)(f)). Also, the GMA requires that actions be taken to prevent contamination of waters of the state and water flowing into the Puget sound (RCW 36.70A.070(1)). Water quality, water quantity, and water temperature are all related and all vital to supporting anadromous fish habitat.

More detail on how critical area protection can contribute to salmon habitat and opportunities for restoration is addressed under each type of critical area in [Chapter 2: Resources for Designating and Protecting Critical Areas](#).

Sources of Best Available Science

Other Washington state natural resource agencies provide sources of best available science, and some provide management recommendations, for protecting critical areas. For links to state agency sources of best available science, see [Chapter 2: Resources for Designating and Protecting Critical Areas](#). Consulting with the local salmon recovery lead entity technical team can provide further guidance on how to address salmon habitat in critical area protection.⁸⁰

A Comprehensive Approach to Critical Areas Protection

Each community is encouraged to design a comprehensive program to protect critical areas. More than just a regulatory ordinance, a local program should include land use policies, critical areas regulations, and zoning standards, and may include non-regulatory programs. Recognizing unique environments and the local values of each community, each local program should be specific to the individual community’s needs.

Setting Program Goals and Policies

Consistent with environmental policies adopted in comprehensive plans and county-wide planning policies, a critical areas protection program should establish goals that seek to:

- Protect members of the public and public resources and facilities from injury, loss of life, or property damage due to landslides and steep slope failures, erosion, seismic events, volcanic eruptions, or flooding.
- Maintain healthy, functioning ecosystems through the protection of unique, fragile, and valuable elements of the environment, including ground and surface waters, wetlands, and fish and wildlife and their habitats, and to conserve the biodiversity of plant and animal species.
- Direct activities not dependent on the use of critical areas resources to less ecologically sensitive sites and mitigate unavoidable impacts to critical areas by regulating alterations in and adjacent to critical areas.

⁸⁰ See [Governor’s Salmon Recovery Office](#) web site.

- Prevent cumulative adverse environmental impacts to water quality, wetlands, and fish and wildlife habitat, and the overall net loss of the ecological functions of wetlands, frequently flooded areas, and habitat conservation areas.
- Promote the enhancement of ecological processes through conservation and restoration measures.⁸¹

These goals may be used both to establish policy support for critical areas regulations and to define the purpose of a critical areas ordinance. Integrating both the environmental policies and regulations within the critical areas regulations will help to maintain consistency between the comprehensive plan and other critical areas program elements.

Environmental Policies

Counties and cities should consider using innovative land management techniques that minimize land use incompatibilities and most effectively maintain critical areas. Techniques to conserve and protect critical areas include the purchase or transfer of development rights, fee simple purchase of the land, less than fee simple purchase, purchase with leaseback, buffering, land trades, conservation easements, or other innovations that maintain current uses and ensure the conservation of these lands.

When considering a community's growth strategy, and when reviewing proposals to change the zoning in an area, cities and counties should use their land use plans to direct growth away from areas that contain large amounts or complex collections of critical areas.⁸² Areas that are likely to contain large amounts or complex collections of critical areas are expensive and difficult to develop. Counties and cities can use existing data sources to identify areas with a high probability of critical area conflicts. They are not likely to achieve the densities specified in the underlying zoning. Avoiding increased densities in these areas will keep a community from setting expectations of development that will be difficult and expensive to meet during local project review. In the case of frequently flooded areas, expansion of the urban growth area into the floodplain is prohibited for some jurisdictions.⁸³

Regional Collaboration

Considering that neighboring jurisdictions may be faced with similar circumstances, it may be beneficial for communities to work together to address critical areas protection. Ecosystems do not stop at city and county borders, or tribal trust lands. Most critical areas are part of larger geographical networks, such as rivers, shorelines, and fault lines that extend through multiple jurisdictions.

Cities are encouraged to coordinate with each other and with their county to share costs and resources to identify and map critical areas, to review the best science that is available and locally applicable, and to draft regulations. Regional agencies or councils of government may help coordinate development of critical area regulations. Including neighboring tribes in technical advisory committees convened for critical areas ordinance updates can be very helpful.

⁸¹ WAC 365-195-925

⁸² WAC 365-196-485

⁸³ RCW 36.70A.110(8)

Multiple jurisdictions may also pool resources in non-regulatory programs. For example, purchasing or management of critical areas easements may be infeasible for an individual jurisdiction, but could be accomplished through a consortium of agencies and non-governmental organizations (such as land trusts) combining resources. Partnering with local land trust organizations has proven helpful in overseeing the successful implementation of landowner conservation easement agreements and other land conservation strategies.

An opportunity for regional collaboration and improved efficiency is linking efforts at updating shoreline master programs with work on critical areas ordinances. Similar efforts that examine local shoreline conditions such as geology, hydrology, and current and potential land use impacts can be used to benefit both critical areas protection and shoreline designations and use regulations.

Another opportunity for regional collaboration is protecting anadromous fish ecosystems that cross multiple jurisdictional boundaries. Local lead entity recovery plans can be used in collaborative multi-jurisdictional efforts, including tribal land, to protect fish habitat.