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memorandum

date November 6, 2012
to Anna Nelson and Doc Hansen
from Pete Lawson and Adam Merrill
subject SMP-CAO integration

Kittitas County and three of its municipalities (Town of South Cle Elum, City of Cle Elum, and City of Ellensburg) are updating their Shoreline Master Programs (SMPs) as required by the Shoreline Management Act (RCW 90. 58) and subsequent legislation and implementing regulations (Washington Administrative Code [WAC] 173-26). The updated SMPs must include provisions to protect “critical areas” that occur within shoreline jurisdiction and Kittitas County is in the process of simultaneously updating its Critical Areas Ordinance (CAO).

This memorandum describes considerations for integrating the County’s updated CAO and the municipalities existing CAOs into their respective SMP updates. In addition, this memo summarizes the results of a review of the existing CAOs for the Town of South Cle Elum, City of Cle Elum, and City of Ellensburg. The review was focused on identifying specific areas of code that may require changes to comply with current Washington Department of Ecology (Ecology) guidance and standards in WAC 173-260-211(2). During their review of the local SMP update processes, Ecology will be evaluating the CAOs in each jurisdiction to ensure compliance with applicable Growth Management Act (RCW 36. 70A) and Shoreline Management Act requirements.

Critical Areas Integration

Purpose and Need for Critical Areas Integration

Critical area and shoreline regulations serve similar purposes but derive their authority from two different state laws: critical areas are governed by the Growth Management Act, and shorelines are governed by the Shoreline Management Act. Recent changes to State law have clarified that local governments must protect critical areas throughout shoreline jurisdiction in a manner that “*assures no net loss of shoreline ecological functions*”¹.

The integration of CAO regulations into SMPs has proven to be a complex process for many jurisdictions, as these sets of regulations overlap, but have different statutory bases and divergent procedural requirements. The following help illustrate some of the reasons why integrating these overlapping regulations can be complicated:

- SMP jurisdiction applies to some (or in some cases, all) of the 100-year floodplain. The 100-year floodplain is a Growth Management Act-designated frequently flooded area and is therefore also regulated via the local CAO.

¹ Washington State Engrossed House Bill 1653 (passed in March of 2010) shifted the test for critical areas habitat protection to “assure no net loss of shoreline ecological function”, replacing the “at least equal to CAO” provision previously included in the State law. See [RCW 36.70A.480.4](http://leg.wa.gov/bills/2010/1653).

- SMPs are required to address development with channel migration zones. Channel migration zones are also Growth Management Act-designated geologically hazardous areas.
- Shoreline rivers are Type S waters, which are Growth Management Act-designated fish and wildlife habitat conservation areas.
- Wetlands are Growth Management Act-designated critical areas regulated by the CAO. Wetlands are also regulated under the SMP if they are “associated” the shoreline. It is possible that two separate wetlands on a single property would be regulated under different statutes.
- Under the Growth Management Act, critical area regulations must be based upon the “best available science” (WAC 365-195-900). This is similar to, but slightly different from, the Shoreline Management Act requirement (in WAC173-26-201(2)(a)) to use the “the most current, accurate, and complete scientific or technical information available.”
- Critical areas within shoreline jurisdiction must be protected such that there is no net loss of shoreline ecological function (RCW 36.70A.480.4). Outside of shoreline jurisdiction, the “no net loss” of shoreline functions requirement does not apply.

State law requires that critical area protections be integrated into the Shoreline Master Program:

State Guidelines for Shoreline Master Programs (WAC 173-26) require Kittitas County to protect critical areas, as defined by the State Growth Management Act (36. 70A RCW), throughout shoreline jurisdiction.

Integrated critical areas protections must meet no net loss standard:

In 2010 the legislature passed EHB 1653 which amended the Growth Management Act (RCW 36. 70A. 480) to read:

Shoreline master programs shall provide a level of protection to critical areas located within shorelines of the state that assures no net loss of shoreline ecological functions necessary to sustain shoreline natural resources as defined by department of ecology guidelines adopted pursuant to RCW 90. 58. 060.

In order to meet the no net loss standard and eventually secure Ecology approval of the updated SMP, the County must review and consider revisions to SMP-integrated critical areas requirements.

More information is available from the Department of Ecology website:

- SMP Update Handbook section on CAO Integration -http://www.ecy.wa.gov/programs/sea/shorelines/smp/handbook/pdf/integrating_caos_smp_revised411.pdf
- <http://www.ecy.wa.gov/programs/sea/shorelines/index.html>
- <http://www.ecy.wa.gov/pubs/wac17326.pdf>

Notwithstanding these complexities, the SMP updates provide an opportunity to clarify the linkages between these two statutes, improve local code administration, and ensure compliance with the State’s “no net loss” requirement.

Strategies for Integrating the SMP and CAO Requirements

Kittitas County and its municipalities have two primary options for integrating their critical areas regulations in their updated SMPs: 1) adopt the CAO into the SMP by reference; or 2) incorporate the CAO regulations directly into the SMP to create a stand-alone ‘one stop shop’ for CAO-SMP requirements. A SMP-integrated critical area ordinance may be the same or different from the standard CAO that applies outside of shoreline jurisdiction.

Adoption-by-reference: Kittitas County jurisdictions may choose to adopt pertinent provisions of their CAOs by reference and create additional policies and standards to meet the State’s no net loss requirement. Certain aspects of the CAOs would not be adopted by reference because there are aspects of the Growth Management Act that are superseded by the Shoreline Management Act. For example, the list of activities that are exempt from regulation under CAOs is different from the list of activities that are exempt from Shoreline Management Act regulation. Local governments cannot deviate from the exemptions provided in RWC 90.58, so the CAO exemptions may not

always apply in shoreline jurisdiction. There is no such thing as a “reasonable use exception” in the Shoreline Management Act; instead deviations from the standard requirements are handled via a shoreline variance. Furthermore, the appeal provisions of the two laws are different.

One advantage of the adoption-by-reference approach is brevity as it does not require restating all of the CAO regulations in the SMP. Furthermore, cross-referencing is standard practices in development codes; for example, the Kittitas County’s subdivision regulations (Kittitas County Code [KCC] Title 17) refer to the zoning code (KCC Title 17), roads and bridges code (KCC Title 12), etc. . . . Typically with this approach, the same development allowances and protection standards are applied in shoreline jurisdiction as in all other areas of the County.

Ecology requires that a specific, adopted and dated version of the CAO be referenced, as opposed to adopting, for example KCD Title 12 *as amended*. Thus, with the adoption-by-reference method future updates to the CAO, even if they are minor, would not apply within shoreline jurisdiction unless or until the jurisdiction amended the SMP to incorporate the updated version of the CAO. Amendments to SMPs must be submitted to Ecology for review and approval.

The adoption-by-reference approach has a number of potential pitfalls. Regulations for critical areas within shoreline jurisdiction must meet CAO “best available science” requirements, as well as the SMP requirement for “no net loss” of shoreline ecological function. The shoreline regulations (and, therefore CAO regulations adopted by reference) must also satisfy the requirement in WAC 173-26-201(2)(a) for using “the most current, accurate, and complete scientific or technical information available.” The CAOs of South Cle Elum, Cle Elum, and to a lesser degree Ellensburg, contain some standards that Ecology may potentially view as falling short of state SMP requirements (as discussed below)². Ecology may be unlikely to approve the updated SMPs unless the municipalities amended their CAOs to address the standards in question. In other words, adopting an existing CAO by reference may not be an option if the jurisdiction is unable to demonstrate that the CAO regulations meet then “no net loss” standard. Questions about compliance could have the effect of delaying the SMP approval process and forcing some, or all, of the three municipalities to undertake comprehensive CAO updates.

The situation discussed above for the municipalities does not necessarily apply to Kittitas County, as the County is conducting a simultaneous update of its CAO. However, it does present an issue of timing, given that to adopt the updated CAO by reference in their updated SMP, the CAO would need to be finalized and adopted before a locally-adopted, updated SMP is submitted to Ecology for review.

The adoption-by-reference approach can also create confusion for staff and applicants since provisions of the two codes would tend to overlap but reside in different chapters/sections of the local codes. Understanding and enforcing separate codes can be challenging for staff and applicants. That said, many jurisdictions such as Whatcom County are taking the adopt-by-reference approach and making it work.

Direct incorporation of critical areas standards: Kittitas County jurisdictions could choose to include critical areas protections directly into their updated SMPs. This option will allow critical areas standards to be integrated with other components of the SMP, eliminating potentially redundant or conflicting regulations. With this option, the SMP of each jurisdiction would contain all of the pertinent Growth Management Act and Shoreline Management Act requirements pertaining to critical areas and there would be a separate CAO (located elsewhere in code) that would only apply outside of shoreline jurisdiction.

²The CAOs for the cities of Ellensburg and Cle Elum indicate that they are based on “best available science”. There is no such statement in the Town of South Cle Elum CAO.

This approach provides opportunity for Kittitas County jurisdictions to integrate applicable provisions of their CAOs with the development standards for residential use, forest practices, etc. However, some of the existing CAO standards may need to be tailored to better suit expected shoreline development scenarios and achieve no net loss. As stated previously, the actual substantive changes needed to make the critical areas standards consistent with State law and guidelines are similar under either scenario. However, the direct incorporation approach would confine the effect of any changes to properties that are within shoreline jurisdiction only, and would not necessarily require a jurisdiction to revise their CAO jurisdiction-wide.

While direct incorporation of critical areas standards into an SMP can simplify the regulation of areas within shoreline jurisdiction, it can lead to some confusion if critical areas regulations differ inside and outside of SMP jurisdiction. For example, a wetland could have different buffer widths and/or mitigation ratios depending on whether or not it is located inside or outside of shoreline jurisdiction. Regardless, for jurisdictions whose CAOs may fall short of the Ecology guidelines but do not wish to undertake a comprehensive CAO update, direct incorporation may be the best option.

Results of Municipality CAO Analyses

Each element of each of the 3 local CAOs (Town of South Cle Elum, City of Cle Elum, and City of Ellensburg) was evaluated in terms of its consistency with Ecology's guidelines. Table 1 summarizes key aspects of South Cle Elum's, Cle Elum's, and Ellensburg's CAOs that may need to be addressed through SMP integration in order to meet the no net loss standard. The table is not a full critique of each CAO in terms of Growth Management Act consistency, but is merely intended to highlight aspects of the existing CAOs that may need adjustment to become part of the approved SMP update.

Elements highlighted in yellow are considered to be out of alignment with Ecology guidelines and therefore likely to require changes if incorporated into the updated SMP (high priority for change). Code elements shown in blue are likely adequate, but could be strengthened to improve consistency, interpretation and/or administration of the code (moderate priority for change). Cells that are not highlighted indicate the code appropriately addresses the specific CAO element as presented.

To help address those code elements that may be improved, specific suggestions are provided to strengthen those code elements. For each code element in Table 1 where potential deficiencies are noted (through highlighting), recommendations for one or more potential changes are presented below. The recommended changes are presented by jurisdiction and are ordered to correspond directly to Table 1. Please note that there are often multiple pathways in the approach to critical areas code updates. Although the specific code suggestions presented below represent a typical approach to compliance with Ecology guidelines, they are by no means exhaustive and other suitable approaches may also achieve the intent of the suggestions.

Potential Improvements to the Town of South Cle Elem Critical Areas Ordinance

1. General CAO Considerations

- a. High priority
 - The CAO does not explicitly state that "best available science" was used to develop critical areas regulations. If "best available science" was consulted, it may be out of date given that the CAO was adopted in 1995.
- b. Moderate priority - None

2. Wetlands

c. High priority

- Consider updating code to indicate that the Wetland Rating Manual for Eastern Washington should be used to classify wetlands.
- Consider removing minimum wetland size requirements as a condition of assigning wetland buffers to Category 2 through 4 wetlands.
- Consider providing wetland mitigation ratios for wetland rehabilitation, enhancement, and preservation, in addition to creation. Base ratios on the 2006 joint agency guidance as provided in the Washington State Department of Ecology, U. S. Army Corps of Engineers Seattle District, and U. S. Environmental Protection Agency Region 10 documents *Wetland Mitigation in Washington State – Parts 1 and 2*.

d. Moderate priority

- Consider adding a performance bond requirement for wetland mitigation and monitoring.
- Consider adding code language explicitly stating that if wetland buffer averaging is implemented, the overall buffer area must be equivalent to the standard buffer before averaging.
- Consider adding code language defining the appropriate mitigation sequencing (avoid, minimize, compensate, etc).
- Consider adding code language addressing the suitability of non-standard (alternative) wetland mitigation approaches, including banking, in-lieu fee programs, and other similar approaches.
- Consider adding code language requiring wetland mitigation prior to, concurrent with, or immediately after the wetland impacts occur.
- Consider adding code language on a specific minimum monitoring period to show compliance with wetland mitigation performance standards. Five years should be adequate as the minimum period, especially if the code allows this to be extended in specific cases – i.e., forested wetland creation.
- Consider adding code language to codify the definition of a qualified wetland scientist as a professional wetland scientist with at least two years of full time work experience as a wetlands professional, including delineating wetlands using the state or federal manuals, preparing wetlands reports, conducting function assessments, and developing and implementing mitigation plans.
- Consider adding code language on the specific minimum requirements for wetland impact and mitigation reporting, as requirements for the Critical Areas study.

3. Fish and Wildlife Habitat Conservation Areas

a. High priority

- Consider revising code to provide to incorporate a stream typing system, such as given in WAC 222-16-030 since there appear to be small streams within the Town's shoreline jurisdiction.

- Consider revising code to provide to incorporate appropriate stream buffers tied to the water typing system as described above.

b. Moderate priority

- Consider adding code language that addresses the complete list of potential FWHCAs, including naturally-occurring ponds under 20 acres; lakes, ponds, streams, and rivers planted with game fish by a governmental or tribal entity; areas of Rare Plant Species and High-Quality Ecosystems; and State Natural Area Preserves/ Natural Resource Conservation Areas if these types of FWHCAs occur within the Town's shoreline jurisdiction.
- Consider adding code language explicitly stating that if riparian buffer averaging is implemented, the overall buffer area must be equivalent to un-averaged condition.
- Consider adding code language specifying a mitigation ratio for both stream impacts (below OHWM) and stream buffer impacts, and/or a requirement that a project must not result in a net loss of ecological functions and values in FWHCAs.
- Consider adding code language that specifies performance standards, including following WDFW-prescribed timing restrictions, for any work below the OHWM of a regulated stream.
- Consider adding code language defining the appropriate mitigation sequencing (avoid, minimize, compensate, etc.).
- Consider adding code language requiring FHWCA mitigation prior to, concurrent with, or immediately after any FWHCA impacts occur.
- Consider adding code language on a specific minimum monitoring period to show compliance with FHWCA mitigation performance standards. Five years should be adequate as the minimum period, especially if the code allows this to be extended in specific cases – i.e., enhancement of forested riparian areas.
- Consider adding code language to codify the definition of a qualified as a professional habitat scientist as a person that must have a degree in biology and professional experience related to the subject species.
- Consider adding code language on the specific minimum requirements for FWHCA impact and mitigation reporting, as requirements for the Critical Areas study.

4. Critical Aquifer Recharge Areas

a. High priority - None

b. Moderate priority

- Consider adding code language to specifically list and define the various types of CARAs potentially present in the Town's shoreline jurisdiction including highly susceptible aquifer recharge areas (per initial CARA mapping prepared for Kittitas County).
- Consider listing specific requirements for hydrogeologic studies for any activities or land uses that pose risks to water quality, and/or reference Ecology guidelines.

5. Frequently Flooded Areas

- a. High priority - None
- b. Moderate priority
 - Consider adding discussion of compensatory floodplain storage creation as mitigation for loss of floodplain storage. Discussion should include requirements for studies demonstrating no-net loss, guidance on the location of storage location in relation to the impacts, and requirements that such mitigation does not degrade ecological processes or create a biological hazard (e.g., fish stranding).

6. Geologically Hazardous Areas

- a. High priority
 - Consider specifically defining channel migration zones as geologically hazardous areas, and specifying performance standards for regulated activities within identified migration zones to be integrated with SMP standards for various shoreline uses.
- b. Moderate priority
 - Consider defining all types of geologically hazardous areas, including erosion hazards, landslide hazards, seismic hazards, and other hazard areas (to be determined by the director).
 - Consider adding language to codify the definition of a qualified as a professional geologic hazard professional as a qualified engineer or geologist, licensed in the state of Washington.
 - Consider expanding and/or specific performance standards that cover the entire range of geologically hazardous areas, including common erosion hazards, landslide hazards, and seismic hazards.

Potential Improvements to the City of Cle Elem Critical Areas Ordinance

1. General CAO Considerations

- High and medium priority – None

2. Wetlands

- a. High priority
 - Consider increasing the minimum standard buffer for Category 1 wetlands from 75 feet to 100 feet in order to obtain greater alignment with best available science and Ecology recommendations. While the existing CAO prescribes wetland buffers of up to 190 for “special cases” (which includes bogs, alkali wetlands, and vernal pools), these wetland types are rare and likely do not occur within shoreline jurisdiction.
 - Consider adding a statement that no net loss of wetland functions and values will be allowed.
- b. Moderate priority

- Consider adding a performance bond requirement for wetland mitigation and monitoring.
- Consider adding code language addressing the suitability of non-standard (alternative) wetland mitigation approaches, including banking, in-lieu fee programs, and other similar approaches.

3. Fish and Wildlife Habitat Conservation Areas

a. High priority

- Consider revising code to incorporate a stream typing system, such as given in WAC 222-16-030. A brief review of PHS data indicates that tributary streams to the Yakima River are present within the City limits.
- Consider revising code to provide to incorporate appropriate stream buffers, tied to a water typing system as described above. Minimum recommended buffers on fish bearing streams are 100 feet.

b. Moderate priority

- Consider adding code language specifying a mitigation ratio for stream buffer impacts, and/or a requirement that a project must not result in a net loss of ecological functions and values in FWHCAs.
- Consider adding code language that specifies performance standards, including timing restrictions, for any work below the OHWM of a regulated stream.
- Consider adding code language that incorporates the specific measures for protecting sensitive species and habitats, when such a state or federal habitat or species management plan exists and when impacts would occur to such habitats and species. Also consider requiring the applicant to prepare an appropriate of a habitat or species management plan in cases where impacts will occur, and no existing plans cover the species or habitats.

4. Critical Aquifer Recharge Areas

a. High priority - None

b. Moderate priority

- Consider adding code language to specifically list and define the various types of CARAs potentially present in the Town's shoreline jurisdiction including highly susceptible aquifer recharge areas (per initial CARA mapping prepared for Kittitas County).

5. Frequently Flooded Areas

a. High priority - None

b. Moderate priority

- Consider adding discussion of compensatory floodplain storage creation as mitigation for loss of floodplain storage. Discussion should include requirements for studies demonstrating no-net loss, guidance on the location of storage location in relation to the impacts, and

requirements that such mitigation does not degrade ecological processes or create a biological hazard (e.g., fish stranding).

6. Geologically Hazardous Areas

a. High priority

- Consider specifically defining channel migration zones as geologically hazardous areas, and specifying performance standards for regulated activities within identified migration zones to be integrated with SMP standards for various shoreline uses.

b. Moderate priority - None

Potential Improvements to the City of Ellensburg Critical Areas Ordinance

1. General CAO Considerations

a. High and moderate priority – None

2. Wetlands

a. High and medium priority – None

3. Fish and Wildlife Habitat Conservation Areas

a. High priority – None

b. Moderate priority

- Consider increasing the minimum standard buffer for non-shoreline fish bearing streams (Type 2 and 3) from 85 and 50 feet to 100 feet, in order to obtain greater alignment with best available science and WDFW recommendations. However, other than the Yakima River, please note that the number of fish-bearing streams occurring within City of Ellensburg SMP jurisdiction is few to none.

4. Critical Aquifer Recharge Areas

a. High and moderate priority – None

5. Frequently Flooded Areas

a. High and moderate priority – None

6. Geologically Hazardous Areas

a. High priority

- Considering updating the CMZ definition to be consistent with the Ecology definition.

Conclusions

Based upon the analysis presented above, CAO-SMP integration options for the County and its municipalities are described below.

Kittitas County

Kittitas County is in the unique position of simultaneously updating both its CAO and SMP. This provides the County an excellent opportunity to clarify the linkages between these two sets of regulations, improve and simplify administration, and ensure compliance with the State's no net loss requirement. For the County, we recommend the following options for CAO integration:

1. Assuming that the County adopts an updated CAO that meets Ecology guidelines, the CAO could be adopted by reference into the updated SMP. However, timing may be an issue with this approach, as the updated CAO would need adopted before a locally adopted, updated SMP could be submitted to Ecology for review.
2. The County could incorporate updated critical areas regulations directly into the updated SMP. With this approach, Ecology review and adoption of the updated SMP would not depend on the timing of the adoption of the GMA-compliant, updated CAO. This likely provides the best pathway for ensuring that standards for floodplains, wetlands, channel migration zones and other features that have dual status under both the Growth Management and Shoreline Management acts are well integrated.

City of Ellensburg

The City of Ellensburg's CAO is generally in compliance with the Ecology guidelines. Our review identified one high-priority issue (relating to the CMZ regulation) and two moderate-priority issues (relating to stream buffers and stream mitigation monitoring) that may fall short of the Ecology guidelines, and subsequently may hamper SMP approval. For the City, we recommend the following option for CAO-SMP integration:

1. The City could adopt the relevant portions of their existing CAO by reference into their updated SMP, but not adopt the sections relating to CMZs or stream buffers for streams within shoreline jurisdiction. Revised CMZ regulations (applying to the Yakima River), and SMP-specific stream buffers from non-SMA streams could be developed for the updated SMP to supersede the missing / deficient provisions in the CAO.

City of Cle Elum and Town of South Cle Elum

Our review of the City of Cle Elum's and Town of South Cle Elum's CAOs has identified a number of key issues (Table 1) – primarily relating to environmental protection (meeting no net loss) – that could hamper SMP approval and SMP implementation if either adopted-by-reference or directly incorporated as-is into the updated SMP. Therefore, we recommend the following options for CAO-SMP integration:

1. The City could revise the portions of the CAO that appear to fall short of Ecology guidelines; the updated CAO would then apply to the whole City, both within and outside of shoreline jurisdiction. The updated CAO could either be adopted by reference or directly incorporated in the updated SMP.
2. The City could avoid revising its existing CAO, but instead develop new critical areas standards to be incorporated directly into SMP. This approach would result in standards based on best available information and science pertaining to City shoreline conditions and meet State law. Essentially, this would result in two different sets of critical areas regulations: one set (the existing CAO) would apply outside of shoreline jurisdiction and the other set (incorporated in the updated SMP) would apply within shoreline jurisdiction.

Table 1. Comparison of Critical Areas Ordinance to Current Guidance for the Jurisdictions of South Cle Elum, Cle Elum, and Ellensburg.

Key:
 Yellow shaded cells represent CAO elements with a higher priority for revision
 Blue shaded cells represent CAO elements with a moderate priority for revision

CAO Type	Regulation	South Cle Elum (CAO adopted in 1995)	Cle Elum (CAO adopted in 2010)	Ellensburg (CAO adopted in 2009)	
General	Addresses All Five identified Types of Critical Areas	Yes	Yes	Yes	
	Statue Purpose Includes Restoration and Preservation/Conservation of Functions and Values	No	No	Yes	
	Includes Exemptions for Land Use Activities	Yes - Includes natural resource activities which are not specifically defined plus numerous additional categories	Yes, but confined to 1) emergencies, 2)operation, maintenance, or repair, and 3) passive outdoor activities	Yes, but confined to 1) emergencies, 2)operation, maintenance, or repair, and 3) passive outdoor activities	
	Purpose statement of CAO code explicitly states protection and conservation of natural ecosystems/ critical areas as an intent of the ordinance.	Yes	Yes	Yes	
	States that best available science was utilized to develop the CAO.	No	Yes	Yes	
	<hr/>				
Wetlands	Requires Use of Washington State Wetland Rating System for Eastern Washington (Hruby)	Yes, but does not specify Wetland Rating Manual for Eastern Washington	Yes	Yes	
	Incorporates Wetland Classification System	Yes - Based on Ecology's Washington State Rating System	Yes - Based on Ecology's Washington State Rating System	Yes - Based on Ecology's Washington State Rating System	
	Requires Adequate Wetland Buffer Widths	Category I 100-200		75 (to 190 feet for special cases, specifically bogs, alkali wetlands, and vernal pools. However, these wetland types likely do not occur within shoreline jurisdiction)	150
		Category II 50-100		75(to 150 feet for special cases, specifically bogs, alkali wetlands, and vernal pools. However, these wetland types likely do not occur within shoreline jurisdiction)	100
		Category III 40-80		60	50
		Category IV 20-50		40	25
		Applies Minimum Wetland Size Requirements for Wetland Buffer Widths to Apply	Yes, Category 2 through 4 wetland buffers only apply if wetland meets minimum size requirement	No	No
	Requires Adequate Mitigation Ratios for Wetland Creation	Category I 6:1		4:1 (mature forest) to 6:1 (sp cases)	6:01
		Category II 3:1 (forested), 2:1 (non-forested)		3:1	3:1
		Category III 1.5:1		2:1	2:1 (6:1 enhancement)
Category IV 1:1			1.5:1	1.5:1 (3:1 enhancement)	
Contains Explicit Mitigation Ratios for Wetland Rehabilitation, Enhancement, or Preservation		No ratios for rehabilitation, enhancement, or preservation	Ratios for wetland rehabilitation, enhancement, or preservation 2x to 4x greater than for creation	Yes	

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CAO Type	Regulation	South Cle Elum (CAO adopted in 1995)	Cle Elum (CAO adopted in 2010)	Ellensburg (CAO adopted in 2009)
	Includes Wetland No Net Loss Provision	Yes	No	Yes
	Specifies Mitigation timing requirements (following impacts)	No	No	Yes
	Requires Performance Bond for Mitigation and Monitoring	No	No	Yes
	Allows Wetland Buffer Averaging	Yes, but no statement that overall buffer area must be equivalent to unaveraged condition.	No	Yes, however requirement that overall buffer area must be equivalent to unaveraged
	Contains Mitigation Sequencing (e.g., avoid, minimize, mitigate) and Preference (e.g., onsite, in-kind) Guidance	No	Yes - code states mitigation should occur following guidance in Wetland Mitigation in Washington State, Parts 1 and 2	Yes
	Requires Mitigation to be Implemented During or Soon After Impact	No	Yes - code states mitigation should occur following guidance in Wetland Mitigation in Washington State, Parts 1 and 2	Yes
	Requires an Adequate Mitigation Monitoring Period	No	Yes - code states mitigation should occur following guidance in Wetland Mitigation in Washington State, Parts 1 and 2	Yes - minimum mitigation monitoring period is 5 years
	Defines and Requires a Qualified Wetland Professional for Delineation/CAR Preparation	No	Yes	Yes
	Discusses Alternative Mitigation (e.g., Mitigation banking, In-lieu fee Program)	Yes - mentions examination of feasibility of conservation money program.	No	Yes
	Contains Impact and Mitigation Reporting Requirements	Yes (City provided forms)	Yes	Yes
FWHCAs	Addresses all FWHCAs as Defined by Ecology (e.g., Federally Listed Species/Habitats, State PHS Species/Habitats, Species/Habitats of Local Importance,	Only riparian habitats, priority species (state listed), and species of local importance.	Yes	Yes
	Applies Adequate Stream Classification System	No stream classification system	No stream classification system	Yes - 4 stream types
	Requires Adequate Stream Buffer Widths	Type 1 The only specified buffer is for Yakima River riparian zone with buffers of 100 to 325 feet depending on intensity of action, T and E species, erosion susceptibility, and buffer enhancement activities. However, if the Yakima River is the only stream within City Limits/UGA, a stream typing system, then a stream typing system may be unnecessary. Type 2 Type 3 Type 4	None	250 feet - Shorelines of State 85 feet - Fish bearing perennial 50 feet - Fish bearing ephemeral 50 feet - Non-fish bearing
	Allows Stream Buffer Averaging	Yes, but no statement that overall buffer area must be equivalent to unaveraged condition.	No	Yes, however requirement that overall buffer area must be equivalent to unaveraged

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CAO Type	Regulation	South Cle Elum (CAO adopted in 1995)	Cle Elum (CAO adopted in 2010)	Ellensburg (CAO adopted in 2009)
	Requires Adequate Stream Buffer Mitigation Ratios and/or Preservation of Buffer Functions and Values	No	No	No buffer mitigation ratios stated, but code requires mitigation will result in equivalent functions and values on a per function basis, be located as near the alteration and in the same subdrainage as impacts
	Includes Instream Work Performance Standards	No	No	Yes
	Requires Adequate Instream Mitigation Ratios and/or Preservation of Functions and Values	No	No explicit ratios stated, but code requires compensating for the impact by replacing, enhancing, or providing substitute resources or environments	No explicit ratios stated, but code requires mitigation will result in equivalent functions and values on a per function basis.
	Contains Mitigation Sequencing (e.g., avoid, minimize, mitigate) and Preference (e.g., onsite, in-kind) Guidance	No	Yes - code states mitigation should occur following guidance in Wetland Mitigation in Washington State, Parts 1 and 2	Yes
	Requires Mitigation to be Implemented During or Soon After Impact	No	Yes - code states mitigation should occur following guidance in Wetland Mitigation in Washington State, Parts 1 and 2	Yes
	Requires an Adequate Mitigation Monitoring Period	No	Yes - minimum mitigation monitoring period is 3 years	No
	Defines and Requires a Qualified FHWCA Professional to Prepare CAR	No	Yes	Yes
	Contains Impact and Mitigation Reporting Requirements	Yes (City provided forms)	Yes	Yes
	Requires preparation of new or use of existing habitat management plans for impacts to sensitive species or habitats	Yes	No	Yes, for bald eagle and state/federal review if impacts to FWHCAs.
CARAs				
	Contains Performance/Protection Standards	Case by case, up to director to impose protection standards	General (e.g., minimize the amount of impervious surface)	Yes
	Defines and Requires a Qualified CARA Professional to Prepare CAR	Yes	Yes	Yes
	Contains Specific Performance Standards for Various Development Activities	No	No (general suggestions)	Yes
	Specific Requirements for Hydrogeologic Assessment	Case by case, up to director to impose assessment	Yes (references Ecology guidelines)	Yes
FFAs				
	Contains Provision for No Net Loss of Floodplain Storage (Zero Rise)	Yes (<10 CY considered negligible)	Yes - no rise in BFE	Yes
	Discusses Compensatory Flood Storage as Mitigation	No	No	Yes
	Addresses Adequate Floodproofing (Discussion or Reference to Additional Code Section)	Yes - References flood prevention ordinance (#285)	Yes - Contains Floodproofing Requirements	Yes - Contains Floodproofing Requirements

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CAO Type	Regulation	South Cle Elum (CAO adopted in 1995)	Cle Elum (CAO adopted in 2010)	Ellensburg (CAO adopted in 2009)
GHAs	Defines and Requires a Qualified GHA Professional to prepare CARs	No	Yes	Yes
	Includes Specific GHA Performance Standards/Prohibitions	Yes (only erosion/landslide hazard zone)	General standards with provision for additional standards pending individual project review	Yes
	Includes Specific Erosion/landslide Study Requirements	Yes, in high risk areas but specific triggers not specifically identified.	Requirements for geologic reports are listed, triggered by individual project review	Yes
	Specifically addresses channel migration zones (CMZs) as GHAs	No	No	Yes, but the CMZ definition in the CAO differs from the definition in the SMP guidelines. The Ecology definition would likely result in a broader CMZ determination