

Jessi Roberts

From: Oliver Grah <ograh@nooksack-nsn.gov>
Sent: Thursday, December 10, 2015 8:48 AM
To: Cliff Strong
Cc: Wendy Steffensen (wendys@re-sources.org); gboggs@whatcomcd.org; Hood, Andrea (DOH) (Andrea.Hood@DOH.WA.GOV); Mark Personius
Subject: pollution from berry fields

Hello Cliff:

Below is an excerpt from the recent meeting notes from the last WCWP meeting, December 4, 2015. As you can see, pollution from berry fields is a real problem thus giving credibility for such agricultural use to be more directly addressed in the CAO in general and CPAL specifically. As you know, blueberry production is best achieved in “wetland soils”, many of which still function as wetlands and are frequently in direct communication with groundwater and surface water.

Cheers,

Oliver John Grah
Water Resources Program Manager
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“Berry fields and fecal coliform

Recent field sampling of blueberry field runoff has resulted in high fecal coliform (FC) counts. Jessica is working on two sites, one large acreage field (field runoff results between 4,000-6,000FC/100mL) in the Sumas watershed and a smaller acreage property (30,000FC/100mL) in the Tenmile watershed. Both fields received manure solids in late fall.

Field staff are learning more about how manure solids are used in berry farming. The group discussed variables that must be considered (e.g. age of manure/composted or not, timing of application, etc.) and plan to gather data and better understand the issue this fall/winter.

For blueberries, farmers may use dairy-origin manure solids applied as side dressing to berry rows for up to the first three years of field establishment. Sawdust may also be used, either with manure solids or instead of solids. Manure solids are cheaper/free, so use of solids is widespread and needs to be explored further as an actual or potential FC source. Raspberry field use manure when fields are renovated, every 5-7 years.

We discussed if dairies have responsibilities associated with distributing manure. WSDA has started to track where manure is going once it leaves a dairy. Though it varies, dairies may have, on average, once month of storage available for solid manure, so the solid manure is leaving the dairies throughout the year. There appear to be a few middle men that provide transportation for a substantial amount of the manure solids leaving the dairies, and manure solids also are hauled away by individuals without any sort of paperwork. Technically, a manure export agreement should be signed by

the dairy and the manure recipient, but that typically happens only when records are needed for the dairy to show WSDA that it is meeting its nutrient balance requirements.

Field staff recognize that berry/crop farmers need information about water quality protection responsibilities and about BMPs to prevent pollution. The WSU extension agent who works with small fruit growers, agronomists with the local Farmer's Co-op, WID leaders and Henry Bierlink (Whatcom Farm Friends/Red Raspberry Commission/WIDs) are all potential conduits for getting information to crop farmers. WCD will invite berry growers to attend WCD's nutrient management training sessions. "

Jessi Roberts

From: Oliver Grah <ograh@nooksack-nsn.gov>
Sent: Wednesday, April 01, 2015 1:26 PM
To: WENDY
Cc: Cliff Strong
Subject: Re: Request to delete CAO provision 16.16.230.C regarding low impact activities exemption

I was referring to use/activities. Recreational use/activities requiring structures or ground disturbance do require authorization.

Sent from my iPhone

On Apr 1, 2015, at 1:03 PM, "WENDY" <w.harris2007@comcast.net> wrote:

Thank, Oliver.

If it is not a regulated development activity, then why do we need to exempt it? That logic does not follow so there should be no problem removing the exemption.

I am aware of this argument already, but my concern is that this exemption will be used when constructing trails and planning parks, which are covered (hopefully), to ignore intensity of use impact, or to ignore these activities when determining buffers.

Cliff, can we get clarification for the purpose of the exemption. What purpose does it then serve? Bellingham has a similar exemption and I have also submitted something in writing to them so I am wondering if this is part of some canned language from years ago that no one has really since thought about.

Wendy

From: "Oliver Grah" <ograh@nooksack-nsn.gov>
To: "Wendy" <w.harris2007@comcast.net>
Cc: "Cliff Strong (CStrong@co.whatcom.wa.us)" <CStrong@co.whatcom.wa.us>
Sent: Wednesday, April 1, 2015 8:54:43 AM
Subject: RE: Request to delete CAO provision 16.16.230.C regarding low impact activities exemption

Hi Wendy:

I totally understand and agree with your request, particularly in regard to BAS. The disconnect, I think, will relate to "development activities." I worked through a couple cases for the County re: recreational

use of critical areas. The conclusion of PDS director and legal counsel was that passive recreation (including hunting) was not a development activity and not subject to CAO regulation. Again, I do not agree with this, but I thought I would give you a heads up in regard to the likely County's stance on this issue. But, nevertheless, it should be debated by the CATAC and CACAC.

Cheers,

Oliver John Grah
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<image001.jpg>

From: WENDY [<mailto:w.harris2007@comcast.net>]

Sent: Tuesday, March 31, 2015 4:40 PM

To: Bert Rubash; Dan McShane; Joel Ingram; Kara Kuhlman; Oliver Grah; Ericson, Ryan; Susan Meyer; Steffensen, Wendy; Audrey Borders; David Haggith; Kate Blystone; Laura Sachs; Mark Personius; Virginia Watson; Roger Almskaar; Wes Kentch; Matt Aamot

Cc: whatcom county planning commisson; county council

Subject: Request to delete CAO provision 16.16.230.C regarding low impact activities exemption

Attached please find my renewed request to delete the exemption for "low impact" activities (hunting and outdoor recreation) at WCC 16.16.230.C, with attached documentation of BAS. This exemption is contrary to the requirements of the GMA and the last BAS report and recommendations. I ask both the citizen review committee and the technical review committee to act on my request.

If the county chooses not to make this revision, please provide the information in the record that supports this departure from BAS, explain your 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, as required under WAC 365-195-915. This is required to meet GMA compliance.

Thank you.

Wendy Harris

Jessi Roberts

From: Oliver Grah <ograh@nooksack-nsn.gov>
Sent: Wednesday, April 15, 2015 8:41 AM
To: WENDY; Cliff Strong
Cc: Roger Almskaar; Amy Dearborn; Audrey Borders; David Haggith; Watson, Virginia; Laura Sachs; Kate Blystone; Wes Kentch; Mark Personius; Steffensen, Wendy; Ericson, Ryan; Dan McShane; Kara Kuhlman; Bert Rubash; Susan Meyer; Joel Ingram; Pete Sim
Subject: RE: Definition of TAC's use of "adverse impacts."

I agree with Wendy's concern. From my standpoint, federal and state standards interpret "significant impact" as an impact requiring an EIS-level of analysis. I do not think use of the term "significant" helps, but hurts the permit application review and permit issuance process.

From: WENDY [mailto:w.harris2007@comcast.net]

Sent: Wednesday, April 15, 2015 12:59 AM

To: Strong, Cliff

Cc: Roger Almskaar; Amy Dearborn; Audrey Borders; David Haggith; Watson, Virginia; Laura Sachs; Kate Blystone; Wes Kentch; Mark Personius; Steffensen, Wendy; Oliver Grah; Ericson, Ryan; Dan McShane; Kara Kuhlman; Bert Rubash; Susan Meyer; Joel Ingram; Pete Sim

Subject: Definition of TAC's use of "adverse impacts."

Rebuttal to Roger Almskaar's Proposed "Definition" of Adverse Impacts

The CAC mission statement requires that we comply with the GMA. The purpose of the CAO is to protect critical area functions and values. The CAC, the TAC and the county are without legal authority to change this legal standard of review.

Roger claims that the TAC use of the term "adverse impact" is vague and unclear, and proposes what is asserted to be from the SMP, incorporating SEPA standards. His definition creates the new qualifier "significant", along with a revised standard of legal review, as follows:

8. "Adverse impact" or "significant adverse impact" means an impact that can be measured or is tangible and has a reasonable likelihood of causing moderate or greater harm to ecological functions or processes or other elements of critical areas ~~the shoreline environment~~.

This is not the appropriate legal standard under the SMP, as clearly set out on the county website:

No Net Loss of Shoreline Functions

Among the goals of the SMP are no net loss of shoreline ecological functions and shoreline restoration. The concept of no net loss of shoreline ecological functions and processes has been broadly addressed through SMP goals, policies, and regulations

that integrate implementation of development standards, mitigation sequencing, vegetation conservation within CAO buffers, evaluation of cumulative effects, etc.
<http://www.whatcomcounty.us/839/Regulations-Standards>

And even the legal standard under SEPA, incorporated by reference in Whatcom County Code, is a great deal more nuanced and qualified, as reflected in WAC 197-11-330. Contrary to the standard created by Roger, it does not include quantification. WAC 197-11-794 provides that "significance involves context and intensity (WAC [197-11-330](#)) and does not lend itself to a formula or quantifiable test. The context may vary with the physical setting. Intensity depends on the magnitude and duration of an impact." SEPA does, however, define "impacts" as "the effects or consequences of actions. Environmental impacts are effects upon the elements of the environment listed in WAC [197-11-444](#)." WAC 197-11-752.

Accordingly, the definition proposed by Roger lacks any basis in fact or law.

I do not think it was the intention of anyone on the TAC to make the CAO non-compliant with the GMA, or to change legal standards of review. I believe it is clear that "adverse impacts" refers to the impacts that degrade the functions and values of critical areas. But since a question has been raised, I request that we send this back to the TAC for clarification instead of trying to second guess what they mean.

Not providing the TAC the opportunity to clarify their intent now would be unprofessional and would raise questions later on in the review process.

Wendy Harris

From: "Roger Almskaar" <almskaarr@comcast.net>
To: "Amy de Vera" <adp@deainc.com>, "Amy Dearborn-WC PDS" <adearbor@whatcomcounty.us>, "Audrey Borders" <msqly@gmail.com>, cstrong@co.whatcom.wa.us, "Dannon Traxler" <dtraxler@langabeertraxler.com>, "Dave Onkels" <david@onkels.com>, "David Haggith" <dhaggithn3@frontier.com>, "George Boggs" <GBoggs@whatcomcd.org>, "Kate Blystone" <kateb@re-sources.org>, "Laura Sachs" <laurabsachs@gmail.com>, "Mark Personius" <MPersoni@co.whatcom.wa.us>, "Max & Carole Perry" <maxandcarole@gmail.com>, "Roger Almskaar" <almskaarr@comcast.net>, "Virginia Watson" <vwilkenswatson@aol.com>, "Wayne Fitch" <wfitch@co.whatcom.wa.us>, "Wendy" <w.harris2007@comcast.net>, "Wes Kentch" <wwkentch@comcast.net>
Sent: Tuesday, April 14, 2015 4:41:25 PM
Subject: Roger A's draft proposal on critical area reports, presented at 4/1 '15 CAC mtg

Sorry to be late getting this to the CAC, been busy reading the 576 page EIS on the comp plan update!

Please email or call if questions,
Roger A, 6781 1324

Cliff, please fwd to TAC members as you see fit

Jessi Roberts

From: Oliver Grah <ograh@nooksack-nsn.gov>
Sent: Wednesday, April 01, 2015 9:43 AM
To: Cliff Strong
Subject: RE: Critical Areas tasks

Here are my changes/additions to Article 2 text re: least environmentally damaging feasible alternative and cumulative impacts. See underline, italics, and bolded text below. Do you still want me to come to the CACAC meeting today to present/defend recommended changes/additions? Also, the only other outstanding tasks I have committed to at this time are to provide my comments on article 7 and a description of levels of critical areas assessment/characterization/mapping/reporting. Let me know.....

16.16.225 Regulated activities.

A. The following activities shall be subject to the provisions of this chapter when they occur within critical areas or their buffers:

1. Clearing, grading, dumping, excavating, discharging, or filling with any material. This includes creating impervious surfaces.
2. Constructing, reconstructing, demolishing or altering the size of any structure or infrastructure, subject to the provisions for a nonconforming structure pursuant to WCC [16.16.275](#), WCC Chapter [20.83](#), and WCC [23.50.070](#).
3. Any other activity for which a County permit is required, excluding permits for interior remodeling.

B. Alteration of critical areas and/or buffers is prohibited except when:

1. Alteration is approved pursuant to the reasonable use or variance provisions of WCC [16.16.270](#);

or
2. An alternatives analysis is conducted that identifies and verifies that the permitted action is the least environmentally damaging feasible alternative consistent with all County land use and building regulations. The least damaging feasible alternative is one that is physically available, technologically feasible, not cost prohibitive, of reduced environmental impact, and that allows the proposed project to perform its intended purpose. See appendix for procedures to conduct such an alternatives analysis; or

16.16.255 Critical areas assessment reports.

The intent of these provisions is to require a reasonable level of technical study and **alternatives** analysis **pursuant 10 16.16.225** sufficient to protect critical areas.

A. When the technical administrator determines a proposed development is within, abutting, or is likely to adversely affect a critical area or buffer pursuant to the provisions of this chapter, he/she shall have the authority to require a critical areas assessment report, **to be prepared by a**. A qualified professional, as defined by this chapter, shall prepare the report **and be** consistent with best available science. The intent of these provisions is to require a reasonable level of technical study and analysis sufficient to protect critical areas. The analysis shall be commensurate with the value or sensitivity of a particular critical area and relative to the scale and potential impacts of the proposed activity.

B. The assessment report shall:

1. Demonstrate that the submitted proposal is consistent with the purposes and specific standards of this chapter;
2. Describe all relevant aspects of the development proposal and critical areas adversely affected by the proposal including any geological hazards and risks associated with the proposal, and assess impacts on the critical area from activities and uses proposed; and

3. Where impacts are unavoidable, demonstrate through an alternatives analysis that no other least environmentally feasible alternative exists.

4. Considers the cumulative impacts of the proposed action that includes past, present, and reasonably foreseeable future actions to facilitate the goal of no net loss of critical areas. Such impacts shall include wildlife, habitat, and migration corridors; water quality and quantity; and other watershed processes that relate to critical area condition, process, and/or service. See appendix for procedures to conduct an analysis of cumulative impacts.

From: Cliff Strong [mailto:CStrong@co.whatcom.wa.us]
Sent: Friday, March 27, 2015 9:31 AM
To: Oliver Grah
Subject: Critical Areas tasks

In Article 2, here are the items I had marked that you were going to work on:

16.16.255 Critical areas assessment reports.

Comment applies to entire section. Then specifically to:

- B. The assessment report shall:
1. Demonstrate that the submitted proposal is consistent with the purposes and specific standards of this chapter;
 2. Describe all relevant aspects of the development proposal and critical areas adversely affected by the proposal including any geological hazards and risks associated with the proposal, and assess impacts on the critical area from activities and uses proposed; and
 3. Where impacts are unavoidable, demonstrate through an alternatives analysis that no other reasonable alternative exists.
 4. Analyze cumulative impacts .

The CAC is currently reviewing Art 2. When we talked on Wednesday, you suggested that you would come up with language that just refers to a guidance doc (either an appendix to the CAO or as a dept. policy) for the TAC to review, but that you'd come to the CAC this week to explain your position.

You had also said you had some stuff for HCAs.

Thanks,

Cliff Strong
Senior Planner
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ARTICLE 7 HABITAT CONSERVATION AREAS (HCAs)

Review by Joel Ingram

16.16.700 Purpose

The purposes of this article are to:

- A. Maintain fish and wildlife populations, ~~especially populations of anadromous fish species,~~ by protecting and conserving ~~valuable~~ fish and wildlife habitat and protecting the ecological processes that sustain these resources.
- B. Protect marine shorelines, valuable terrestrial habitats, ~~lakes and ponds,~~ and natural rivers and streams and their associated riparian areas, and the ecosystem processes on which these areas depend.
- C. Regulate development so that isolated populations of species are not created and habitat degradation and fragmentation are avoided, ~~especially along riparian corridors.~~
- D. Maintain the natural geographic distribution, connectivity, and quality of fish and wildlife habitat ~~and avoid cumulative loss of such important habitats.~~

16.16.710 Designation, Mapping and Classification – Habitat Conservation Areas

- A. Habitat conservation areas are those areas identified as being of critical importance to the maintenance of certain fish, wildlife, and/or plant species. These areas are typically identified either by known point locations of specific species (such as a nest or den) or by habitat areas or both. All areas within the County meeting these criteria are hereby designated critical areas and are subject to the provisions of this article (see also Appendix D).
- B. The approximate location and extent of identified fish and wildlife habitat areas are shown on the County's critical area maps. These maps are to be used as a guide and do not provide a definitive critical area determination. ~~Applicants must obtain approval of HCA maps as part of the permit review and approval process. The~~ County shall update the maps as new fish and wildlife habitat areas are identified.
- C. For purposes of this chapter, habitat conservation areas shall include all of the following:
 1. Streams. Streams shall be designated according to the following criteria:
 - a. Shoreline streams are those streams identified and regulated as shorelines of the state as defined by WAC 173-18-410 and designated in the Whatcom County Shoreline Master Program (WCC Title ~~23~~).
 - b. ~~Other~~ Fish bearing streams that do not meet the definition of shorelines of the state but have known ~~use-use, historical use,~~ or potential use by anadromous or resident fish species. The Technical Administrator shall make determinations of known or potential fish use in consultation with federal, state and tribal biologists and in accordance with Best Available Science. ~~Factors of consideration when determining a stream as fish bearing include but are not limited to; and shall take into consideration factors such as~~ species life cycle requirements, habitat suitability, channel gradient, presence or lack of ~~fish passage~~ barriers, ~~stocked fish populations by government or tribal entities~~ and/or a reasoned evaluation of current, historic, and potential fish use by a qualified professional.

Comment [OG1]: We need to address cumulative loss of HCA and buffers due to ag conversion from forestry and forest practices. These are large sources of cumulative loss.

Comment [OG2]: Update?

ARTICLE 7 – HABITAT CONSERVATION AREAS

- c. Non-fish bearing streams are those streams that have no known historical or potential use by anadromous or resident fish. Special consideration shall be made for drainage ditches replacing natural channels that previously existed, particularly in the agriculture situation.
2. Areas ~~in with~~ which federally and/or state listed species have been identified or the presence of suitable potential habitat for listed species. See Appendix D. ~~have a primary association.~~
3. State priority habitats and areas associated with state priority species.
4. ~~Commercial and recreational shellfish areas, including designated~~ Shellfish Habitat Conservation Areas.
5. Kelp and eelgrass beds.
6. Surf smelt, Pacific herring, and Pacific sand lance documented and potential spawning areas.
7. Naturally occurring ponds and lakes, under 20 acres in size.
8. ~~Naturally occurring lakes over 20 acres and o~~All other waters defined as Waters of the State, including marine waters, ~~and waters planted with game fish by a government or tribal entity.~~
9. Natural Area Preserves and natural resource conservation areas as defined by Washington Department of Natural Resources.
10. Locally important species and habitats that have recreational, cultural, and/or economic value to citizens of Whatcom County, including the following:
 - a. Species
 - i. Osprey
 - ii. Turkey vulture
 - iii. Nooksack dace
 - iv. Salish sucker
 - b. Habitats
 - i. The Marine nearshore habitat and the associated vegetated marine riparian zone. These areas support productive eelgrass beds, marine algal turf, and kelp beds that provide habitat for numerous priority fish and wildlife species including, but not limited to, forage fish, seabird and shorebird foraging and nesting sites, and harbor seal pupping and haulout sites. This designation applies to the area from the extreme low tide limit to the ordinary high water mark. Provided that reaches of the marine shoreline that were lawfully developed for commercial and industrial uses, prior to the adoption of this chapter, may be excluded from this designation, but not otherwise exempt from this chapter. See Appendix E.
 - ii. Identified elk wintering and calving grounds.
 - iii. Unique natural plant communities designated by the Washington Department of Natural Resources.
 - iv. The Chuckanut wildlife corridor, which extends east from Chuckanut Bay and adjacent marine waters, including Chuckanut Mountain, Lookout Mountain,

Comment [JW13]: Defined in several RCWs as lakes, rivers, ponds, streams, inland waters, underground water, salt waters, estuaries, tidal flats, beaches and lands adjoining the seacoast of the state, and all other surface waters and watercourses within the jurisdiction of the state of Washington.

Comment [JW14]: Consider removing species from this list and focus on habitat areas. Fish species and shellfish covered under other areas, terrestrial species could include black bear, deer, mountain lions, wolves, waterfowl and a variety of other species not found in Appendix D

Comment [OG5]: I do not agree with this statement. Habitat for some sensitive species is not well known or understood and thus needs to be evaluated as part of the CAO review process.

~~the northern portions of Anderson Mountain, (Stewart Mountain?) continuing along the southern Whatcom County border to Mount Baker / Snoqualmie National Forest boundary. This area represents the last remaining place in the Puget Trough where the natural land cover of the Cascades continues to the shore of Puget Sound. See Appendix E, Mountain including Lookout Mountain, Stewart Mountain, and the northern portions of Anderson Mountain to Chuckanut Bay and the adjacent marine waters and represents the last remaining place in the Puget Trough where the natural land cover of the Cascades continues to the shore of Puget Sound. See Appendix E.~~

Comment [OG6]: yes

Comment [OG7]: If one of the goals of CAO regulation is no net loss, then an honest analysis of the cumulative loss of habitat due to forest practices must be accomplished. Commercial forestry being exempt from CAO regulations makes the no net loss an infeasible objective. A point in case, SFR are regulated in HCA's and buffers, but not commercial forestry, e.g., Chuckanut Corridor.

Comment [JW18]: Clarification of corridor area. Also Stewart Mountain not included in graphic in Appendix E. Include?

D. In addition to the ~~species~~, habitats, and wildlife corridors identified in WCC 16.16.710.C.10, the County may designate additional ~~species~~, habitats of local importance, and/or wildlife corridors as follows:

1. In order to nominate an area, ~~species~~, or corridor to the category of Locally Important, an individual or organization must:
 - a. Demonstrate a need for special consideration based on:
 - i. ~~Identified species of d~~Declining population,
 - ii. ~~Documented species s~~Sensitivity to habitat manipulation and cumulative loss,
 - iii. Commercial, recreational, cultural, or other special value, or
 - iv. Maintenance of connectivity between habitat areas.
 - b. Propose relevant management strategies considered effective and within the scope of this chapter;
 - c. Identify effects on property ownership and use; and
 - d. Provide a map showing the species or habitat location(s).
2. Submitted proposals shall be reviewed by the County and may be forwarded to the State Departments of Fish and Wildlife, Natural Resources, and/or other local, state, federal, and/or Tribal agencies or experts for comments and recommendations regarding accuracy of data and effectiveness of proposed management strategies.
3. If the proposal is found to be complete, accurate, and consistent with the purposes and intent of this chapter and the various goals and objectives of the Whatcom County Comprehensive Plan, and the Growth Management Act, the County Council will hold a public hearing to solicit comment. Approved nominations will become designated locally important habitats, species, or corridors and will be subject to the provisions of this chapter.

16.16.720 Habitat Conservation Areas – General Standards

The following activities may be permitted in habitat conservation areas and/or their buffers when all reasonable measures ~~have~~ been taken to avoid adverse effects on species and habitats, compensatory mitigation is provided for all adverse impacts that cannot be avoided, and the amount and degree of the alteration are limited to the minimum needed to accomplish the project purpose, provided that locally important species and habitats shall be subject to WCC 16.16.730:

Comment [OG9]: The first of many references to "reasonable measures", "minimum needed", "feasible alternative", "project purpose", etc..... thus giving credence to the need to conduct an objective alternatives analysis.

- A. Developments that meet the reasonable use and variance standards set forth in WCC 16.16.270.

ARTICLE 7 – HABITAT CONSERVATION AREAS

- B. Relocation of streams, or portions of streams, when there is no other feasible alternative and when the relocation will result in equal or better habitat and water quality and quantity, and will not diminish the flow capacity of the stream or other natural stream processes, provided that the relocation meets state Hydraulic Project Approval requirements and that relocation of shoreline streams shall be prohibited unless the relocation has been identified formally by the Washington Department of Fish and Wildlife as essential for fish and wildlife habitat enhancement or identified in watershed planning documents prepared and adopted pursuant to RCW 90.82, the Salmonid Recovery Plan or the Salmon Recovery Board Habitat Project List or County Shoreline Restoration Plan.
- C. Road, trail, bridge, and right-of-way crossings provided they meet the following criteria:
1. There is no other feasible alternative route with less impact on critical areas.
 2. The crossing minimizes interruption of natural processes such as channel migration, the downstream movement of wood and gravel and the movement of all fish and wildlife. Bridges are preferred for all stream crossings and should be designed to maintain the existing stream substrate and gradient, ~~span the bankfull width, or be proven to not have an appreciable increase in backwater elevation at the 100yr event and provide adequate horizontal clearance on each side of the ordinary high water mark, and provide adequate vertical clearance for debris likely to be encountered at high water above the ordinary high water mark.~~
 3. Culverts shall be designed according to applicable state and federal guidance criteria for fish passage as identified in ~~Water Crossing Design Guidelines, WDFW 2013 Fish Passage Design at Road Culverts, WDFW March 1999,~~ and/or the National Marine Fisheries Service *Guidelines for Salmonid Passage at Stream Crossings, 2000*, (and subsequent revisions) and in accordance with a state Hydraulic Project Approval. The applicant or property owner shall maintain fish passage through the bridge or culvert.
 4. The County may require that existing culverts be removed, ~~replaced,~~ or ~~fish passage barrier status~~ corrected as a condition of approval if the culvert is detrimental to fish passage or water quality, ~~and a feasible alternative exists.~~
 5. ~~Culvert c~~Crossings shall be limited to the minimum ~~width-length~~ necessary. ~~C~~Shared common crossings are the preferred approach where multiple properties can be accessed by one crossing.
 6. Access to private development sites may be permitted to cross habitat conservation areas if there are no feasible alternative alignments. Alternative access shall be pursued to the maximum extent feasible, including through the provisions of RCW 8.24. Exceptions or deviations from technical standards ~~may be considered by the Technical Administrator on a case-by-case basis where the resulting outcome reduces overall impacts to any identified Critical Area for width or other dimensions, and specific construction standards to minimize impacts may be specified, including placement on elevated structures as an alternative to fill, if feasible.~~
- D. Construction of a structure that is associated with an agricultural use; or the reconstruction, remodeling, or maintenance of such structures in a habitat conservation area buffer, subject to all of the following criteria:
1. The structure is located within an existing lot of record and is an existing agricultural use.
 2. There is no other feasible location with less impact to critical areas.

Comment [OG10]: Bankfull discharge roughly corresponds to the 2-yr recurrence interval event, that is essentially common and will be more common with projected climate change. As such, either wider area or at least recognize the impact.

Comment [JWI11]: Defined as the point when stream water leaves the channel and begins to inundate the surrounding floodplain.

Comment [OG12]: Climate change needs to be considered in this.

Comment [OG13]: This should be expanded to address commercial forestry and ag conversion.

WHATCOM COUNTY CRITICAL AREAS ORDINANCE

3. Clearing and grading activity and impervious surface are limited to the minimum necessary to accommodate the proposed structure and, where possible, surfaces shall be made of pervious materials.
 4. Unavoidable adverse effects on critical areas are mitigated in accordance with this chapter.
- E. Storm water management facilities limited to detention / retention / treatment ponds, media filtration, lagoons and infiltration basins may be permitted in a stream buffer, subject to all of the following standards:
1. The facility is located in the outer fifty percent (50%) of the standard stream buffer and does not displace or impact a forested riparian community;
 2. There is no other feasible location for the storm water facility and the facility is located, constructed, and maintained in a manner that minimizes adverse effects on the buffer and adjacent critical areas;
 3. The storm water facility meets applicable County or state storm water management standards and the discharge water meets state water quality standards; and
 4. Low impact development approaches have been considered and implemented to the maximum extent feasible.
- F. Storm water conveyance or discharge facilities such as dispersion trenches, level spreaders, and outfalls may be permitted in a habitat conservation area buffer on a case-by-case basis when the Technical Administrator determines that all of the following are met:
1. Due to topographic or other physical constraints, there are no feasible locations for these facilities outside the buffer;
 2. The discharge is located as far from the ordinary high water mark as possible and in a manner that minimizes disturbance of soils and vegetation;
 3. The discharge outlet is designed to prevent erosion and promote infiltration; and
 4. The discharge meets freshwater and marine state Water Quality Standards, including the need to evaluate cumulative impacts to 303(d) impaired water bodies, total maximum daily load (TMDL) standards as appropriate at the point of discharge. Standards should include filtration through mechanical or biological means, vegetation retention, timely reseeding of disturbed areas, use of grass-lined bioswales for drainage, and other mechanisms as appropriate within approved stormwater "special districts."
 5. The discharge outlet is designed to exclude fish from entering or migrating into stormwater conveyance systems.
- G. Clearing and grading, when allowed as part of an authorized activity or as otherwise allowed in these standards, may be permitted provided that the following shall apply:
1. Grading is allowed only during the designated dry season, which is typically regarded as May to October of each year, provided that the County may extend or shorten the designated dry season on a case-by-case basis, based on actual weather conditions.
 2. Appropriate erosion and sediment control measures shall be used at all times. The soil duff layer shall remain undisturbed to the maximum extent possible. Where feasible, disturbed topsoil shall be salvaged and/or -redistributed to other areas of the site. Areas shall be revegetated as needed to stabilize the site.

Comment [OG14]: NPDES Phase II standards should be referenced.

Comment [OG15]: Again issue is frequency of this event and climate change.

Comment [OG16]: The real point is 303(d) impaired waters.

Comment [OG17]: Make consistent with other closures re: Lake Whatcom watershed.

Comment [JWI18]: With special considerations for Water Resource Special Management Areas as described in WCC 20.80.735, Lake Samish, Padden and Whatcom watersheds

ARTICLE 7 – HABITAT CONSERVATION AREAS

3. The moisture-holding capacity of the topsoil layer shall be maintained by minimizing soil compaction or re-establishing natural soil structure and infiltrative capacity on all areas of the project area not covered by impervious surfaces.

Comment [OG19]: Great goal but rarely feasible.

H. Stream bank stabilization and shoreline protection may be permitted subject to all of the following standards:

1. Natural shoreline processes will be maintained to the maximum extent practicable.
2. The activity will not result in increased erosion and will not alter the size or distribution of shoreline or stream substrate, or eliminate or reduce sediment supply from feeder bluffs.
3. Stream and shoreline protection and launching ramps on shorelines of the state shall comply with WCC Title 23 and with state Hydraulic Project Approval requirements.
4. No adverse impact to critical fish or wildlife habitat areas or associated wetlands will occur.
5. No alteration of juvenile fish migration corridors will occur.
6. No net loss of intertidal or riparian habitat function will occur.
7. Non-structural measures, such as placing or relocating the development further from the shoreline, planting vegetation, or installing on-site drainage improvements, are not feasible or not sufficient.
8. Stabilization is achieved through bioengineering or soft armoring techniques in accordance with an applicable ~~h~~Hydraulic ~~p~~Permit Approval issued by the Washington Department of Fish and Wildlife.
9. Hard bank armoring is discouraged and may occur only when the property contains an existing permanent structure(s) that is in danger from shoreline erosion caused by wave action or riverine processes and not erosion caused by upland conditions, such as the alteration of natural vegetation or drainage, and the armoring shall not increase erosion on adjacent properties and shall not eliminate or reduce sediment supply. An objective alternatives analysis shall be conducted to demonstrate that there are no other less environmentally damaging alternatives to the more impacting proposed action. Upstream and downstream impacts shall also be included in the analysis.
10. Normal sloughing, erosion of steep bluffs, or shoreline erosion itself, without a scientific or geotechnical analysis, is not a demonstration of need.
11. The bank stabilization or shore protection will not adversely affect habitat conservation areas or mitigation will be provided to compensate for adverse effects where avoidance is not feasible.

I. Construction of trails and roadways less than or equal to thirty (30) feet wide, may be permitted in a habitat conservation area buffer when not directly related to a crossing and are subject to all of the following standards:

1. There is no other feasible alternative route with less impact on the critical area.
2. The road or trail minimizes erosion and sedimentation, hydrologic alteration, and disruption of natural processes such as channel migration, wood recruitment and natural wildlife movement patterns.
3. ~~The road or T-trails in through a~~ riparian (stream) buffers shall be located in the outer fifty percent (50%) of the standard buffer. ~~except for limited viewing platforms and~~

Comment [JWI20]: This will result in a functional loss of habitat protection and should be mitigated for.

WHATCOM COUNTY CRITICAL AREAS ORDINANCE

~~crossings; shall not exceed 12 feet in width and shall be made of pervious material where feasible.~~

4. Trails may include limited viewing platforms that shall not exceed 12 feet in width and shall be made of pervious materials where feasible.
 5. The road or trail is constructed and maintained in manner that minimizes disturbance of the buffer and associated critical areas.
- J. New utility lines and facilities may be permitted when all of the following criteria are met:
1. Impacts to fish and wildlife habitat shall be avoided to the maximum extent possible.
 2. Where feasible, installation shall be accomplished by boring beneath the scour depth of the stream or water body and the width of the channel migration zone where present.
 3. ~~The utilities shall cross streams~~ Trenching of utilities across a stream channel shall be conducted as at an angle greater than sixty (60) degrees to the centerline of the channel or perpendicular to the channel centerline as possible whenever boring under the channel is not feasible. Utilities shall be installed below potential scour depth regardless of method.
 4. Crossings shall be contained within the footprint of an existing road or utility crossing where possible.
 5. The utility installation shall not increase or decrease the natural rate, extent, or opportunity of channel migration.
- K. New public flood protection measures and expansion of existing ones may be permitted, subject to WCC Title 17, Article 4 of this chapter and a state Hydraulic Project Approval; provided that, bioengineering or soft armoring techniques shall be used where feasible. Hard bank armoring may occur only in situations where soft approaches do not provide adequate protection.
- L. Instream structures, such as, but not limited to, high flow bypasses, dams, and weirs, shall be allowed only as part of a watershed restoration project as defined pursuant to SMP 23.110.W.10 or identified in watershed planning documents prepared and adopted under RCW 90.82, the Salmonid Recovery Plan or Salmon Recovery Board Habitat Project List, and the County's Shoreline Restoration Plan and upon acquisition of any required state or federal permits. The structure shall be designed to avoid adverse effects on stream flow, water quality, or other habitat functions and values.
- M. Construction, reconstruction, repair and maintenance of docks and public or private launching ramps may be permitted subject to the following:
1. The dock or ramp is located and oriented and constructed in a manner that minimizes adverse effects on navigation; wave action, water quality, movement of aquatic and terrestrial life; ecological processes; eelgrass beds, shellfish beds, spawning habitat, and wetlands.
 2. Docks or ramps on shorelines of the state shall comply with WCC Title 23 and state Hydraulic Project Approval requirements.
 3. Natural shoreline processes will be maintained to the maximum extent practicable. The activity will not result in increased erosion and will not alter the size or distribution of shoreline or stream substrate, or eliminate or reduce sediment supply from feeder bluffs.
 4. No adverse impact to critical fish or wildlife habitat areas or associated wetlands will occur.

Comment [OG21]: This will require a technical analysis by a qualified specialist.

Comment [OG22]: Does this exist? I don't think I've seen it.

Comment [OG23]: Shouldn't this apply to non-SMP situations?

Comment [JWI24]: All lakes have public access to my knowledge and new private launches should not be permitted

ARTICLE 7 – HABITAT CONSERVATION AREAS

- 5. No alteration of juvenile fish migration corridors will occur.
- 6. No net loss of intertidal or riparian habitat function will occur.
- N. On-site sewage disposal systems (OSS) may be permitted when accessory to an approved residential structure, for which it is not feasible to connect to a public sanitary sewer system and when operated and maintained in accordance with WCC 24.05.170, provided that adverse effects on water quality and slope stability are avoided.
- O. Single-family developments may be permitted to encroach into stream buffers subject to the Technical Administrator’s approval provided that all of the criteria in WCC 16.16.270.A are met.
- P. All other developments may be allowed in Shellfish Protection Districts outside of actual shellfish habitats, when permitted by zoning and when the requirements of WCC 16.16.720.N are met.
- Q. Alteration or removal of beaver built structures more than two years old, provided that:
 - 1. ~~The applicant demonstrates that non-destructive measures, such as the use of “beaver deceivers” are not feasible. Beaver deceivers or auto leveler devices have been demonstrated to not appropriately resolve ponding / backwatering that is negatively affecting adjacent land or property.~~
 - 2. Impacts to wetland, river or stream functions are minimized and mitigation is provided to compensate for lost value.
 - 3. The property owner obtains a HPA from WDFW prior to initiating alteration or removal of the beaver built structure.
 - 4. The property owner provides a copy of the HPA to the Technical Administrator.

Comment [OG25]: Beaver dams are one of the most effective ecosystem components that maintains ecosystem resilience in the face of climate change. There is a program sponsored by USFWS and WDFW that provides workshops on the importance of such re: climate change.

Comment [JWI26]: RCW 77.36.030 authorizes the removal of wildlife (including beaver) that are negatively impacting property

16.16.730 Standards – Locally Important Habitats and Species

Alterations that occur within a locally important habitat area or that may affect a locally important species as defined herein shall be subject to review on a case-by-case basis. The Technical Administrator shall have the authority to require an assessment of the effects of the alteration on species or habitats and may require mitigation to ensure that adverse effects do not occur. A qualified specialist made required to evaluate the presence of sensitive species and important habitats if the County is lacking such This data. This standard is intended to allow for flexibility and responsiveness with regard to locally important species and habitats.

Comment [OG27]: Reference appendix D?

16.16.740 Standards – Habitat Conservation Area Buffers

The Technical Administrator shall have the authority to require buffers from the edges of all habitat conservation areas in accordance with the following:

- A. Buffers shall be established for development activities adjacent to habitat conservation areas as necessary to protect the integrity, functions and values of the resource. Buffer widths shall reflect the sensitivity of the species or habitat present and the type and intensity of the proposed adjacent human use or activity. Buffers shall not include areas that are functionally and effectively disconnected from the habitat area by a road or other substantial developed surface.
- B. Stream Buffers. The standard buffer widths required by this article are considered to be the minimum required and presume the existence of a dense vegetation community in the buffer zone adequate to protect the stream functions and values at the time of the proposed activity. When a buffer lacks adequate vegetation to protect critical area

Comment [OG28]: I wish all activities that impact HCA’s and buffers can be addressed per no net loss objective. Re: forest practices being exempt.

Comment [JWI29]: Existing roadway end buffer requirements. As per revision 16.16.720(3) allow new roadways within 50% of standard buffer. Overall reduction in buffer= loss. Truck road and Rutzatz Mosquito lake near acme, WDFW hatchery at Brainian Cr. as examples.

Roads or trails permitted under 16.16.720 I should not be considered as buffer break or the installation of roadway be mitigated for additional loss of buffer, 50% reduction.

WHATCOM COUNTY CRITICAL AREAS ORDINANCE

functions, the Technical Administrator may increase the standard buffer, require buffer planting or enhancement, and/or deny a proposal for buffer reduction or buffer averaging.

Comment [JWI30]: Does this happen?

The standard buffer shall be measured landward horizontally on both sides of the stream from the ordinary high water mark as identified in the field, provided that for streams with identified channel migration zones, the buffer shall extend outward horizontally from the outer edge of the channel migration zone on both sides. The required buffer shall be extended to include any adjacent regulated wetland(s), landslide hazard areas and/or erosion hazard areas and required buffers, but shall not be extended across roads or other lawfully established structures or hardened surfaces. The following standard buffer width requirements are established, provided that portions of streams that flow underground may be exempt from these buffer standards at the Technical Administrator's discretion when it can be demonstrated that no adverse effects on aquatic species will occur:

Comment [OG31]: Again, this is a narrow area given its commonality and continued climate change.

Comment [OG32]: Frequently flooded areas should also be referenced since they are commonly the buffers associated with HCA's

1. Shoreline streams - 150 feet
2. Fish bearing streams - 100 feet
3. Non-fish bearing streams - 50 feet

C. Buffers for Other Habitat Conservation Areas. The Technical Administrator shall determine appropriate buffer widths for other habitat conservation areas based on the best available information. Buffer widths for non-stream habitat conservation areas shall be as follows:

Comment [JWI33]: Agency working on new riparian buffer guidelines but won't be public until June 2016. Review of technical work conducted by other jurisdictions point towards buffers for all F streams based off of dominate climax community height. Here Doug Fir ~150FT.

Habitat Conservation Area	Buffer Requirement
Areas with which federally listed species have a primary association State Priority Habitats and areas with which Priority Species have a Primary Association	Buffers shall be based on recommendations provided by the Washington Department of Fish and Wildlife PHS Program; provided that local and site specific factors shall be taken into consideration and the buffer width based on the best available information concerning the species/habitat(s) in question and/or the opinions and recommendations of a qualified professional with appropriate expertise.
Commercial and recreational shellfish areas	Buffers shall extend one hundred-fifty (150) feet landward from ordinary high water mark of the marine shore. Buffers shall not be required adjacent to Shellfish Protection Districts, but only in nearshore areas where shellfish reside.
Kelp and Eelgrass Beds	Buffers shall extend one-hundred fifty (150) feet landward from ordinary high water mark of the marine shore
Surf Smelt, Pacific Herring, and Pacific Sand Lance Spawning Areas	Buffers shall extend one-hundred fifty (150) feet landward from ordinary high water mark of the marine shore
Natural Pond and Lakes	Ponds under 20 acres - buffers shall extend 50 feet from the ordinary high water mark; Lakes 20 acres and larger - buffers shall extend 100 feet from the ordinary high water mark, provided that where vegetated wetlands are associated with the shoreline, the buffer shall be based on the wetland buffer requirements in WCC 16.16.630.
Natural Area Preserves and Natural Resource Conservation Areas	Buffers shall not be required adjacent to these areas. These areas are assumed to encompass the land required for species preservation.

ARTICLE 7 – HABITAT CONSERVATION AREAS

Habitat Conservation Area	Buffer Requirement
Locally Important Habitat Areas	<p>The buffer for marine nearshore habitats shall extent landward 150 feet from the ordinary high water mark.</p> <p>The need for and dimensions of buffers for other locally important species or habitats shall be determined on a case-by-case basis, according to the needs of the specific species or habitat area of concern. Buffers shall not be required adjacent to the Chuckanut wildlife corridor. The Technical Administrator shall coordinate with the Washington Department of Fish and Wildlife and other state, federal or Tribal experts in these instances, and may use WDFW PHS management recommendations when available.</p>

D. The Technical Administrator shall have the authority to reduce buffer widths on a case-by-case basis, [through an objective alternatives analysis](#) provided that the general standards for avoidance and minimization per 16.16.260.A(1)(a) and (b) shall apply, and when the applicant demonstrates to the satisfaction of the Technical Administrator that all of the following criteria are met:

Comment [OG34]: Alternatives analysis

1. The buffer reduction shall not adversely affect the habitat functions and values of the adjacent habitat conservation area or other critical area.
2. The buffer shall not be reduced to less than seventy-five (75) percent of the standard buffer as defined in WCC 16.16.740.[B and C](#).
3. The slopes adjacent to the habitat conservation area within the buffer area are stable and the gradient does not exceed thirty percent (30%) [\(see Article 3\)](#).

Comment [JWI35]: Add protection of stream habitat conservation area buffer as well as items listed in chart.

Comment [OG36]: Reference Article 3

E. The Technical Administrator shall have the authority to average buffer widths on a case-by-case basis, provided that the general standards for avoidance and minimization per 16.16.260.A(1)(a) and (b) shall apply, and when the applicant demonstrates to the satisfaction of the Technical Administrator that all the following criteria are met:

1. The total area contained in the buffer area after averaging is no less than that which would be contained within the standard buffer and all increases in buffer dimension are parallel to the habitat conservation area.
2. The buffer averaging does not reduce the functions or values of the habitat conservation area or riparian habitat, or the buffer averaging, in conjunction with vegetation enhancement, increases the habitat function.
3. The buffer averaging is necessary due to site constraints caused by existing physical characteristics such as slope, soils, or vegetation.
4. The buffer width is not reduced to less than seventy-five percent (75%) of the standard width as defined in WCC 16.16.740.[B and C](#).
5. The slopes adjacent to the habitat conservation area within the buffer area are stable and the gradient does not exceed thirty percent (30%).
6. Buffer averaging shall not be allowed if habitat conservation area buffers are reduced pursuant to subsection D above.

Comment [JWI37]: Same as comment 11

F. The Technical Administrator shall have the authority to increase the width of a habitat conservation area buffer on a case-by-case basis [using an objective alternatives analysis](#) when there is clear evidence that such increase is necessary to achieve any of the following:

1. Comply with the requirements of a habitat management plan prepared pursuant to WCC 16.16.750.
2. Protect fish and wildlife habitat, maintain water quality, ensure adequate flow conveyance, provide adequate recruitment for large woody debris, maintain adequate stream temperatures, or maintain in-stream conditions.
3. Compensate for degraded vegetation communities, [303\(d\) impaired water bodies](#), or steep slopes adjacent to the habitat conservation area.
4. Maintain areas for channel migration [and/or frequently flooded areas](#).
5. Protect adjacent or downstream areas from erosion, landslides, or other hazards.
6. Protect streams from high intensity adjacent land uses.

16.16.750 Review and Reporting Requirements

A. When County critical area maps or other sources of credible information indicate that a site proposed for development or alteration is more likely than not to contain habitat conservation areas or buffer, or could adversely affect a habitat area or buffer, the Technical Administrator shall require a site evaluation (field investigation) by a qualified professional or other measures to determine whether or not the species or habitat is present. If no habitat conservation areas are present, then review will be considered complete. If the site evaluation determines that the species or habitat is present, the Technical Administrator shall require a critical areas assessment report or habitat management plan (HMP), provided that no report or evaluation shall be required for developments outside of buffers within the upland portions of Shellfish Conservation Areas. The Technical Administrator shall have the authority to waive the report requirement when he/she determines that the project is a single-family development that involves less than 0.5 acre of clearing and/or vegetation removal, [and/or within the outer 50 percent of the buffer](#) and will not directly disturb the species, or specific areas or habitat features that comprise the habitat conservation area (nest trees, breeding sites, etc.) as indicated by a site plan or scaled drawing of the proposed development.

Comment [OG38]: Define?

Comment [OG39]: Such as?

B. The assessment report / HMP shall describe the characteristics of the subject property and adjacent areas. The assessment shall include determination of appropriate buffers as set forth in WCC 16.16.740. The assessment shall also include field identification and/or delineation of habitat areas, analysis of historical aerial photos, review of public records, and interviews with adjacent property owners as necessary to determine potential effects of the development action on critical areas. Assessment reports shall include the following site- and proposal-related information unless the Technical Administrator determines that any portion of these requirements ~~are is~~ unnecessary given the scope and/or scale of the proposed development:

Comment [JWI40]: This statement seems very loose for single family developments and offers no real protection. Discussion needed.

1. A map drawn to scale or survey showing the following information:
 - a. Topographic, hydrologic, and vegetative features.
 - b. The location and description of wildlife and habitat features, and all critical areas on or ~~within 150 ft of the site, abutting the site.~~
 - c. Proposed development activity.
 - d. Existing physical features of the site including buildings, fences, and other structures, roads, parking lots, utilities, water bodies, etc.

ARTICLE 7 – HABITAT CONSERVATION AREAS

2. An analysis of how the proposed development activities will affect the fish and wildlife habitat conservation area and/or buffer, including the area of direct disturbance; effects of storm water management; proposed alteration to surface or subsurface hydrology; natural drainage or infiltration patterns; clearing and grading impact; temporary construction impacts; effects of increased noise, light or human intrusion.
 3. Provisions to reduce or eliminate adverse impacts of the proposed development activities including, but not limited to:
 - a. Buffering and clustering of development,
 - b. Retention of native vegetation,
 - c. Access limitations,
 - d. Seasonal restrictions on construction activities in accordance with the guidelines developed by the Washington Department of Fish and Wildlife, the US Army Corps of Engineers, the Salmonid Recovery Plan and/or other agency or tribe with expertise and jurisdiction over the subject species/ habitat, and
 - e. Other appropriate and proven low impact development techniques.
 4. Management recommendations developed by WDFW through its PHS program.
 5. When appropriate due to the type of habitat or species potentially present or the project area conditions, the Technical Administrator may also require that the report include additional information including, but not limited to, direct observations of species use or detailed surface and subsurface hydrologic features both on and adjacent to the site. The assessment of off-site conditions shall be based on available information and shall not require accessing off-site properties.
 6. Bald eagle habitats shall be protected pursuant to the Washington State Bald Eagle Protection Rules (WAC-232-12-292), the provisions of which require a cooperative Habitat Management Plan to be developed in coordination between the WDFW and landowner whenever projects that alter habitat are proposed within a nest territory or communal roost. The County shall issue development permits only after certification from the WDFW that the development is in compliance with an approved Habitat Management Plan.
- C. All habitat management plans shall be prepared in consultation with the State Department of Fish and Wildlife and/or other federal, state, local or tribal resource agencies with jurisdiction and expertise in the subject species/habitat.
- D. At the request of the applicant, the County may gather the required information in this section for applicants seeking to develop a single-family home, provided that:
1. Availability of County staff shall be at the discretion of the Technical Administrator and subject to workload and scheduling constraints.
 2. Fees for County staff services shall be in accordance with the unified fee schedule.

Comment [OG41]: Reference to 303(d) impaired water bodies should be made.

Comment [JWI42]: Is this something that is done often, does the County want to leave this in code.

16.16.760 Mitigation Standards for Habitat Conservation Areas

Activities that adversely affect habitat conservation areas and/or their buffers as determined by the Technical Administrator shall include mitigation sufficient to achieve no net loss of habitat functions and values in accordance with WCC 16.16.260 and this section.

- A. In determining the extent and type of mitigation required, the Technical Administrator may consider all of the following:

Comment [OG43]: Makes sure that mitigation sequencing is included.

WHATCOM COUNTY CRITICAL AREAS ORDINANCE

1. The ecological processes that affect and influence critical area structure and function within the watershed or sub-basin;
2. The individual and cumulative effects of the action upon the functions of the critical area and associated watershed;
3. Observed or predicted trends regarding the gains or losses of specific habitats or species in the watershed, in light of natural and human processes;
4. The likely success of the proposed mitigation measures;
5. Effects of the mitigation actions on neighboring properties; and
6. Opportunities to implement restoration actions formally identified by an adopted Shoreline Restoration Plan, watershed planning document prepared and adopted pursuant to RCW 90.82, a Salmonid Recovery Plan or project that has been identified on the Salmon Recovery Board Habitat Project List or by the Washington Department of Fish and Wildlife as essential for fish and wildlife habitat enhancement.

B. The following additional mitigation standards shall apply:

1. Compensatory mitigation for alterations to habitat areas shall achieve equivalent or greater biologic functions, and shall provide similar functions to those that are lost or altered.
2. Compensatory mitigation in the form of habitat restoration or enhancement is required when a habitat is altered permanently as a result of an approved project. Alterations shall not result in net loss of habitat.
3. Where feasible, mitigation projects shall be completed prior to activities that will disturb habitat conservation areas. In all other cases, mitigation shall be completed as quickly as possible following disturbance and prior to use or occupancy of the activity or development. Construction of mitigation projects shall be timed to reduce impacts to existing fish, wildlife and flora, provided that the Technical Administrator may adjust the timing requirements to allow grading, planting, and other activities to occur during the appropriate season(s).
4. ~~Compensatory mitigation shall be provided on-site whenever feasible through an objective alternatives analysis, or off-site mitigation in the location that will provide the greater ecological benefit to the species and/or habitats affected and have the greater likelihood of success may be accepted at the discretion of the Technical Administrator. Mitigation shall occur as close to the impact site as possible, as mitigation is moved further away from the impacted habitat the Technical Administrator may increase the amount of mitigation required. If offsite mitigation is proposed the applicant must demonstrate through a watershed or landscaped based analysis that the mitigation will have a greater ecological benefit, within the same sub-basin, and in a similar habitat type as the permitted alteration unless the applicant demonstrates to the satisfaction of the Technical Administrator through a watershed or landscape based analysis that mitigation within an alternative sub-basin of the same watershed would have greater ecological benefit.~~
5. All mitigation sites shall have buffers consistent with the buffer requirements established in 16.16.740 B and C of this chapter, provided that the Technical Administrator shall have the authority to approve a smaller buffer when existing site constraints (such as a road) prohibit attainment of the standard buffer. Mitigation actions shall not create buffer encumbrances on adjoining properties.

Comment [JWI44]: Trying to get across the point that impacts and mitigation for HCA's should be considered on a smaller reach scale size of impacts and offsetting impacts. Loss of shade, LWD, leaf litter, bank hardening, substrate manipulation, erosion, sedimentation cannot be adequately offset at other locations = increased mitigation for offsite activities.

ARTICLE 7 – HABITAT CONSERVATION AREAS

6. The Technical Administrator shall have authority to require annual monitoring of mitigation activities and submittal of annual monitoring reports in accordance with WCC 16.16.260.C to ensure and document that the goals and objectives of the mitigation are met. The frequency and duration of the monitoring shall be based on the specific needs of the project as determined by the Technical Administrator.
7. All mitigation areas shall be protected and managed to prevent degradation and ensure protection of critical area functions and values into perpetuity. Permanent protection shall be achieved through deed restriction or other protective covenant in accordance with ~~WCC 16.16.265~~.
8. Mitigation projects involving instream work including, but not limited to, installation of large woody debris shall be designed to ensure there are no adverse hydraulic effects on upstream or downstream properties. The County River and Flood Division shall review any such mitigation projects for compliance with this provision.

Comment [JWI145]: Notice on Title of Record?

Jessi Roberts

From: Oliver Grah <ograh@nooksack-nsn.gov>
Sent: Wednesday, April 08, 2015 10:20 AM
To: Cliff Strong; Bert Rubash; Dan McShane; Joel Ingram; Kara Kuhlman; Pete Sim; Ryan Ericson; Susan Meyer; Wendy Steffensen
Cc: Audrey Borders; David Haggith; Kate Blystone; Laura Sachs; Mark Personius; Roger Almskaar; Virginia Watson; Wendy Harris; Wes Kentch; Amy de Vera; Analiese Burns; Dannon Traxler; David Onkels; ebinney@pacificecologic.com; George Boggs; Max & Carole Perry; Michele; Pam Borso; Perry Eskridge; Vikki; Amy Dearborn; Andrew Wisler; John Thompson; Travis Bouma; Wayne Fitch
Subject: RE: Critical Areas TAC agenda for 4/8/15
Attachments: OJG Art 7 HCAs - JIngram review 2015-03-09.docx

Hi Cliff:

Here are my word processed/track changes/comments on Article 7. I understand that we did not complete the review of Article 7. If I am wrong, I apologize. But, I feel that the TAC should consider my comments.

See you this afternoon.

Oliver John Grah
Water Resources Program Manager
Natural Resources Department
Nooksack Indian Tribe
P.O. Box 157
Deming, WA 98224
360.592.5176 x3291
ograh@nooksack-nsn.gov



From: Cliff Strong [<mailto:CStrong@co.whatcom.wa.us>]
Sent: Wednesday, April 01, 2015 1:33 PM
To: Bert Rubash; Dan McShane; Joel Ingram; Kara Kuhlman; Oliver Grah; Pete Sim; Ryan Ericson; Susan Meyer; Wendy Steffensen
Cc: Audrey Borders; David Haggith; Kate Blystone; Laura Sachs; Mark Personius; Roger Almskaar; Virginia Watson; Wendy Harris; Wes Kentch; Amy de Vera; Analiese Burns; Dannon Traxler; David Onkels; ebinney@pacificecologic.com; George Boggs; Max & Carole Perry; Michele; Pam Borso; Perry Eskridge; Vikki; Amy Dearborn; Andrew Wisler; John Thompson; Travis Bouma; Wayne Fitch
Subject: Critical Areas TAC agenda for 4/8/15

Team, attached is the agenda for next week, as well as the review material. Please note that there really aren't many staff proposed changes to these sections so we'll probably be out fairly early. However, they still need to go through you.

Thanks,

Cliff Strong

Senior Planner

Whatcom County Planning & Development Services

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Jessi Roberts

From: Oliver Grah <ograh@nooksack-nsn.gov>
Sent: Thursday, February 04, 2016 4:01 PM
To: Cliff Strong
Subject: RE: Critical Areas CAC mtg

Thanks, Cliff, for responding.

From: Cliff Strong [<mailto:CStrong@co.whatcom.wa.us>]
Sent: Thursday, February 04, 2016 3:26 PM
To: Oliver Grah <ograh@nooksack-nsn.gov>
Subject: RE: Critical Areas CAC mtg

Hey Oliver,

- Nope, no more TAC meetings unless the P/C or Co/C want to send something back to you guys. Since November I've been saying that we had to wind down so I can get things ready for P/C, though I did sneak a couple more meetings in to finish up CPAL (everything else had been reviewed by both committees) (and which also postponed going to the P/C, much to Mark's chagrin).
- Yes, 1/13/16 is the last version of the draft code I distributed, though I've been cleaning it up a bit since and will reissue, probably next week.
- The P/C's first meeting on this will be 2/25, though they'll probably have it for at least 6 meetings, maybe more. I've put together a tentative schedule that I'll distribute with the code.
- I'm not sure what you mean by "dealing with inconsistency between BAS and the updated CAO." I distributed a draft of the BAS/staff report, went over it with both committees, asked for comments (of which there were surprisingly few), and incorporated those comments. I know Wendy H said one or two papers she submitted weren't listed, told her I couldn't find those particular emails and asked her to resend, but haven't heard back from her. Is that what you mean? Things missing?
- Lastly, last Thursday Wendy S sent me some edits to Arts. 4, 5, and 5.5, but I cannot incorporate them at this point given the lateness and the fact that they haven't been reviewed by either the TAC or the CAC, so you'd have to submit them as comments directly to the P/C.

Thanks,

Cliff Strong

Senior Planner

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From: Oliver Grah [<mailto:ograh@nooksack-nsn.gov>]
Sent: Thursday, February 04, 2016 1:20 PM
To: Cliff Strong
Subject: RE: Critical Areas CAC mtg

Hi Cliff:

The last I heard from you was January 20 in an email to the CAC. See below. I thought we were going to have one last meeting of the TAC to fully close out TAC activities. I've been told we are done. For my own tracking activity, I am assuming that the latest version of the CAO is dated 1-13-16 as that is the last sent to either the TAC or the CAC based on your emails. Correct? Also, when is the Commission hearing scheduled for as I do not have record of being informed on this. Finally, is a staff report going to be developed that deals with inconsistency between BAS and the updated CAO? It seems that much of our deliberation addressed the recommendations and requirements of BAS and those that either were incorporated into the CAO and those that were not. Please let me know.

Cheers,

Oliver John Grah
Water Resources Program Manager
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360. 592-5140 Ext. 3139
ograh@nooksack-nsn.gov



From: Cliff Strong [<mailto:CStrong@co.whatcom.wa.us>]

Sent: Wednesday, January 20, 2016 12:50 PM

To: Audrey Borders <msqly@gmail.com>; David Haggith <dhaggithn3@frontier.com>; Kate Blystone <kateb@re-sources.org>; Laura Sachs <laurabsachs@gmail.com>; Mark Personius <MPersoni@co.whatcom.wa.us>; Roger Almskaar <almskaarr@comcast.net>; Virginia Watson <vwilkenswatson@aol.com>; Wendy Harris <w.harris2007@comcast.net>; Wes Kentch <wwkentch@comcast.net>

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Subject: Critical Areas CAC mtg

Looks like we'll have a quorum, so we're on. See you at 3:30.

Thanks,

Cliff Strong

Senior Planner

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Jessi Roberts

From: Oliver Grah <ograh@nooksack-nsn.gov>
Sent: Monday, June 22, 2015 2:08 PM
To: Cliff Strong
Subject: RE: CAO Tasks

Thanks Cliff! At some point I offered to develop an appendix on how to conduct an alternatives analysis. Is that something you/TAC still wants me to do?

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From: Cliff Strong [<mailto:CStrong@co.whatcom.wa.us>]
Sent: Monday, June 22, 2015 11:41 AM
To: Oliver Grah
Subject: CAO Tasks

Oliver, I've searched all my notes and here's what's remaining that I had noted that you volunteered to work on:

16.16.255 Critical areas assessment reports.

The intent of these provisions is to require a reasonable level of technical study and alternatives analysis pursuant to 16.16.225 sufficient to protect critical areas.

- A. When the technical administrator determines a proposed development is within, abutting, or is likely to adversely affect a critical area or buffer pursuant to the provisions of this chapter, he/she shall require a critical areas assessment report, to be prepared by a qualified professional and be consistent with best available science. The analysis shall be commensurate with the value or sensitivity of a particular critical area and relative to the scale and potential impacts of the proposed activity.
- B. The assessment report shall:
 1. Demonstrate that the submitted proposal is consistent with the purposes and specific standards of this chapter;
 2. Describe all relevant aspects of the development proposal and critical areas adversely affected by the proposal including any geological hazards and risks associated with the proposal, and assess impacts on the critical area from activities and uses proposed; and
 3. Where impacts are unavoidable, demonstrate through an alternatives/mitigation sequencing analysis that no other reasonable alternative exists.
 4. Considers the cumulative impacts of the proposed action that includes past, present, and reasonably foreseeable future actions to facilitate the goal of no net loss of critical areas. Such impacts shall include those

to wildlife, habitat, and migration corridors; water quality and quantity; and other watershed processes that relate to critical area condition, process, and/or service. See appendix X for procedures to conduct an analysis of cumulative impacts.

5. Identify proposed mitigation and protective measures as required by this chapter.

From Definitions:

“Critical areas assessment”

- Routine office
- Field reconnaissance to verify existing info
- Field reconnaissance with data gathering
- Routine site delineation
- Comprehensive delineation

Cumulative Impact means past, present, and reasonably foreseeable future actions that have caused impact that should be evaluated together.

Practicable alternative

“Infiltration” means the downward entry of water into the immediate surface of soil.

Wetland hydrology

Thanks,

Cliff Strong

Senior Planner

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