

## Jessi Roberts

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**From:** w.harris2007@comcast.net  
**Sent:** Wednesday, August 13, 2014 9:25 PM  
**To:** Cliff Strong  
**Subject:** a few small corrections

**Follow Up Flag:** Follow up  
**Due By:** Wednesday, August 20, 2014 10:30 AM  
**Flag Status:** Completed

Thank you for the notes from the July meeting. That was a lot of work.

I am requesting the following corrections to my statements for better clarity.

Page 1, E.i.4: I wanted to know which of the recommendations from the BAS Report were actually incorporated into the CAO as enacted so that we could review those that were not and determine whether they still warranted consideration. I asked if staff could provide us with a list reflecting this information.

E.i.5. (Please add): I asked to be apprised of TAC meetings so that I could attend as an audience member.

Page3, 3.b.v.1: Wants explanation of the purpose and role of the CAO and each CA, and what it means to protect "function and value."

I also find it confusing to refer to the CAR. I have always referred to the CAO, and that is how I have heard others do it. I think this is more accurate since it reflects the title of the provisions we are reviewing.

A final suggestion is whether it would be possible to audiotape the meeting and post this online along with the notes. I always find this helpful when I am reviewing an issue and need to understand what happened at a committee that I did not attend. This might be an appropriate item to raise at the next meeting.

Thank you,

Wendy Harris

**From:** "Strong, Cliff" <[CStrong@co.whatcom.wa.us](mailto:CStrong@co.whatcom.wa.us)>

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

**Cc:** "David Onkels" <[david@onkels.com](mailto:david@onkels.com)>, "George Boggs" <[GBoggs@whatcomcd.org](mailto:GBoggs@whatcomcd.org)>, "Max & Carole Perry" <[maxandcarole@gmail.com](mailto:maxandcarole@gmail.com)>

**Sent:** Wednesday, August 13, 2014 2:33:13 PM

**Subject:** Critical Areas Citizens Advisory Committee - Agenda for 8/20 mtg

Please find attached the agenda for next week's meeting. As requested, PDS environmental staff will be making a presentation on our review process. Also attached are my notes from last meeting for you to review prior to approval at the meeting.

Also, please be advised that the County Executive has informed us that he is not planning on appointing alternate members. Therefore, if you are on vacation next week, give me a call upon your return and I can fill you in on what happened at the meeting.

See you next Wednesday,

**Cliff Strong**

Senior Planner

Whatcom County Planning & Development Services

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**Jessi Roberts**

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**From:** w.harris2007@comcast.net  
**Sent:** Tuesday, June 10, 2014 8:39 PM  
**To:** Cliff Strong  
**Subject:** BAS update

**Follow Up Flag:** Follow up  
**Flag Status:** Completed

Best Available Science:

## **Making Mitigation Work: The Report of the Mitigation that Works Forum (DOE, 2008)**

This is relevant to mitigation sequencing and the importance of ecosystem based landscape planning. It is also interesting to our group because it uses the Birch Bay Watershed Characterization Pilot Project as an example. Wendy Steffensen and myself were on the Planning Commission Ad Hoc committee for this, and I am not certain, but Roger may have been. I like this because it written for the layman but contains solid science.

<https://fortress.wa.gov/ecy/publications/summarypages/0806018.html>.

Connected to this is a Army Corp. publication on the use of advance mitigation issued in 2012

<https://fortress.wa.gov/ecy/publications/summarypages/1206015.html>.

## Jessi Roberts

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**From:** WENDY <w.harris2007@comcast.net>  
**Sent:** Sunday, August 16, 2015 7:07 PM  
**To:** Steffensen, Wendy; Dan McShane; Oliver Grah; Pete Sim; Ryan Ericson; Susan Meyer; Kara Kuhlman; Joel Ingram; David Haggith; Kate Blystone; Laura Sachs; Mark Personius; Audrey Borders; Roger Almskaar; Virginia Watson; Wes Kentch; Cliff Strong; Wendy Harris; Bert Rubash  
**Subject:** BAS for small, unconnected wetlands

Cliff: After reviewing BAS, I realized that there has been an important change in our outstanding of wetland function and habitat science. The BAS is reflected in a final EPA report on small unconnected wetlands issued only this January. It is referenced by Wendy Steffensen in the below email and I wanted to make sure that this has been included in our updated BAS and considered as part of our wetland and HCA policies in the CAO.

This report is fairly important because it contradicts the usual mitigation policy of filling in small wetlands and creating larger, centralized wetlands. The EPA found that having smaller and even unconnected wetlands provided important habitat value that was lost when wetlands were increased in size but reduced in number, and that this also had important impacts on downstream water quality.

Give the preference in the county and cities to allow compensatory mitigation by filling small wetlands and creating larger, more regional wetlands and storm water projects, this is important information that could require a change in compensatory mitigation policies for wetland and habitat conservation area critical areas. And beyond that, this information may have important impacts on the creation of new In Lieu of Fee mitigation banking projects by local municipalities. ILF programs are premised on the belief that larger, centralized habitat areas always have greater conservation value.

This new science indicates that this is not always the case and that the issue is more nuanced. This provides stronger support for the need for a watershed based characterization and analysis to obtain the type of information necessary to make determinations affecting critical area and ecosystem function.

Wendy Harris

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**From:** "Wendy Steffensen" <[WendyS@re-sources.org](mailto:WendyS@re-sources.org)>  
**To:** "Cliff Strong" <[CStrong@co.whatcom.wa.us](mailto:CStrong@co.whatcom.wa.us)>, "Susan Meyer" <[sume461@ecy.wa.gov](mailto:sume461@ecy.wa.gov)>, "George Boggs" <[GBoggs@whatcomcd.org](mailto:GBoggs@whatcomcd.org)>, "Kate Blystone" <[kateb@re-sources.org](mailto:kateb@re-sources.org)>, "Wendy" <[w.harris2007@comcast.net](mailto:w.harris2007@comcast.net)>, "Oliver Grah" <[ograh@nooksack-nsn.gov](mailto:ograh@nooksack-nsn.gov)>, "Ryan Ericson" <[Ryan@futurewise.org](mailto:Ryan@futurewise.org)>, "Wayne Fitch" <[wfitch@co.whatcom.wa.us](mailto:wfitch@co.whatcom.wa.us)>

**Sent:** Thursday, March 12, 2015 10:34:25 AM

**Subject:** small ag wetland and connectivity

Hi Cliff and all,

Do we have these references in our BAS?

[Connectivity of Streams and Wetlands to Downstream Waters: A Review and Synthesis of the](#)

[Scientific Evidence \(PDF\)](#) (408 pp, 18 MB, [about PDF](#))

[Fact Sheet: Connectivity of Streams and Wetlands to Downstream Waters \(PDF\)](#) (1 pp, 447 KB, [about PDF](#))

I have just started looking at these refs- it seems we should incorporate them into our discussion of small ag wetlands.

Wendy S.

**Wendy Steffensen**

RE Sources for Sustainable Communities

North Sound Baykeeper

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## Jessi Roberts

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**From:** w.harris2007@comcast.net  
**Sent:** Wednesday, August 13, 2014 12:05 AM  
**To:** Cliff Strong  
**Cc:** Mark Personius  
**Subject:** BAS: USDA Forest Service, trees and air quality and human health in US

Hi Cliff

Please add this to the list of BAS.

When I reviewed the CAOCAC website, I did not see the BAS that I had previously submitted. Does this need to be resubmitted?

Also, could you let me know when the minutes from the last meeting are posted. I would like to review them to ensure that they reflect adequate specificity on the matters of compliance and BAS.

Were you able to find the county's submission for its FEMA compliance plan and any cases and consultant reports that were accepted by the county as part of the Door 3 process?

Finally, can you apprise me of how my request for review of questions and topics of concern and the need for the TAC to convene will be handled?

Thanks again for all of your great assistance and help. I look forward to your responses.  
Wendy Harris

<http://www.nrs.fs.fed.us/pubs/46102>

It is in PDS format and hard to simply hyperlink.

**Title:** Tree and forest effects on air quality and human health in the United States

**Author:** [Nowak, David J.](#); Hirabayashi, Satoshi; [Bodine, Allison](#); [Greenfield, Eric](#).

**Year:** 2014

**Publication:** Environmental Pollution. 193: 119-129.

**Key Words:** Air pollution removal, Air quality, Ecosystem services, Human mortality, Urban forests

**Abstract:** Trees remove air pollution by the interception of particulate matter on plant surfaces and the absorption of gaseous pollutants through the leaf stomata. However, the magnitude and value of the effects of trees and forests on air quality and human health across the United States remains unknown. Computer simulations with local environmental data reveal that trees and forests in the conterminous United States removed 17.4 million tonnes (t) of air pollution in 2010 (range: 9.0-23.2 million t), with human health effects valued at 6.8 billion U.S. dollars (range: \$1.5-13.0 billion). This pollution removal equated to an average air quality improvement of less than one percent. Most of the pollution removal occurred in rural areas, while most of the health impacts and values were within urban areas. Health impacts included the avoidance of more than 850 incidences of human mortality and 670,000 incidences of acute respiratory symptoms.

Last Modified: 7/25/2014

**Jessi Roberts**

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**From:** WENDY <w.harris2007@comcast.net>  
**Sent:** Wednesday, December 17, 2014 4:17 AM  
**To:** Cliff Strong  
**Cc:** Borders, Audrey; Haggith, David; Blystone, Kate; Sachs, Laura; Mark Personius; Almskaar, Roger; Watson, Virginia; Kentch, Wes; Dannon Traxler; David Onkels; George Boggs; Max & Carole Perry; Pam Borso; Perry Eskridge; Pete Sim; Bert Rubash; McShane, Dan; Ingram, Joel; Kuhlman, Kara; Grah, Oliver; Ericson, Ryan; Meyer, Susan; Steffensen, Wendy  
**Subject:** An alternative approach to addressing the CAO.

Cliff, the assignment asks us to prioritize the different projects, but I do not believe this can be done in a meaningful way based on the information we have been provided. Our role is to review the CAO and determine how well it has meet its requirement to protect the function and values of each critical area in achieving no net loss. Without quantifiable, objective information and measurements, I am unable to determine if county performance standards are adequate, and if so, to what extent, and how the success rate varies among the different critical areas.

This is crucial information and goes the heart of the CAO and its intended purpose. If the county has not been tracking and reviewing the results of its mitigation standards, than our first priority should be to address this fatal flaw and help the county develop some objective, quantifiable method of evaluating performance standards to meet no net loss. That is what I believe is the highest priority. Without this information, we are just flailing around in the dark without a clue of appropriate priorities.

I understand that this can be a difficult, time consuming and expensive process, and that the state provides little to assist in this process, but that by itself is not an excuse to simply ignore the obligation to meet NNL. We must start out with a quantifiable base line standard as a minimum of any mitigation project.

Additionally, the analysis that is required in this kind of review must be undertaken through a watershed based characterization that assesses the interconnected functions of the ecosystem. One has already occurred in Birch Bay, and further reference materials can be found here.

<http://www.ecy.wa.gov/mitigation/landscapeplan.html>.  
<http://wdfw.wa.gov/conservation/habitat/planning/lha/whatcom.html>.

I find the "Making Mitigation Work" report a very practical approach to tackling these difficult issues, and chapter 5 in particular provides helpful suggestions for developing objective evaluation standards.

5: Support Making Mitigation Work

..... 22



- 5.1. Develop and track a suite of standard evaluation metrics and monitoring approaches ..... 22
- 5.2. Create a compliance monitoring and inspection checklist for mitigation projects..... 24
- 5.3. Require adaptation/adjustments if mitigation projects aren't working ..... 24
- 5.4. Dedicate sufficient human and financial resources to compliance monitoring and adaptive management programs at all levels of government ..... 25
- 5.5. Support local governments with training and technical assistance ..... 25
- 5.6. Create a common understanding of what it takes to make mitigation work in the community of practitioners

<https://fortress.wa.gov/ecy/publications/summarypages/0806018.html>.

The approach the county is advocating.. listing out particular problems or concerns for revision, will use all of our time and resources with little result.. at the end, we still have a CAO that does not track its effectiveness. It is this type of hodge-podge, piecemeal, site specific planning that has created much of the problem and it makes not sense to try to fix things by adopting the same unsuccessful approach.

I advocate the we abandon the current approach of listing out recommended improvements, and work on the methodolgy that the CAO addresses. We need to develop a process to review, analyze and quantify our ability to achieve NNL. Only then, will individual changes strengthens and improve the CAO.

Respectfully submitted for your consideration.  
Wendy Harris

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**From:** "Cliff Strong" <CStrong@co.whatcom.wa.us>  
**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" <w.harris2007@comcast.net>, "Wes Kentch" <wwkentch@comcast.net>  
**Cc:** "Dannon Traxler" <dtraxler@langabeertraxler.com>, "David Onkels" <david@onkels.com>, "George Boggs" <GBoggs@whatcomcd.org>, "Max & Carole Perry" <maxandcarole@gmail.com>, "Pam Borso" <borsope@aol.com>, "Perry Eskridge" <perrye@wcar.net>, "Pete Sim" <Pete.Sim@bp.com>, "Bert Rubash" <kilaruba@copper.net>, "Dan McShane" <mcshanedan@gmail.com>, "Joel Ingram" <Joel.Ingram@dfw.wa.gov>, "Kara Kuhlman" <KaraK@lummi-nsn.gov>, "Oliver Grah" <ograh@nooksack-

nsn.gov>, "Ryan Ericson" <Ryan@futurewise.org>, "Susan Meyer" <sume461@ecy.wa.gov>, "Wendy Steffensen" <wendys@re-sources.org>

**Sent:** Friday, December 12, 2014 10:24:08 AM

**Subject:** Critical Areas CAC meeting 12/17

CACAC, please find attached the agenda for next week's meeting. Sorry for the tardiness, but it's been a very busy week.

Thanks,

**Cliff Strong**

Senior Planner

Whatcom County Planning & Development Services

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**Jessi Roberts**

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**From:** WENDY <w.harris2007@comcast.net>  
**Sent:** Monday, July 20, 2015 3:38 AM  
**To:** Cliff Strong  
**Subject:** Case Details

Cliff, I was referencing the 12.1.11 compliance order listed in the below link. However, there are also two subsequent findings of continued noncompliance issued by the Hearings Board that are helpful in explaining understanding HCA issues. The dates are from 1.23.13 and 2.5.14

<http://www.gmhb.wa.gov/CaseDetail.aspx?cid=478>

I am continuing to work on HCA issues even though the CAC has moved on as I believe there are a number of issues that have not been appropriately resolved. We failed to touch on issues of habitat connectivity, movement corridors, patch sizes, intensity of use impacts, seasonal ranges, breeding habitat, winter range, areas with high population density and species richness, candidate species as species of local importance, etc. .

I am not sure if I just do not understand the buffer requirements, because it sounds to me like for federal and state species, the buffers are ultimately the result of the private negotiation between the staff and the developer. I see two problems here, one regarding administrative discretion, See the WEAN case, at foot note 131, page 36 of 49, and the other regarding the failure to use BAS to guide buffers. Please correct me if I am mistaken.

Wendy

## Jessi Roberts

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**From:** w.harris2007@comcast.net  
**Sent:** Sunday, August 10, 2014 7:58 PM  
**To:** Audrey Borders; Wes Kentch; Laura Sachs; vw; Kate Blystone; Wendy Harris; David Haggith  
**Cc:** Cliff Strong; Mark Personius  
**Subject:** CAC work plan and TAG request

Dear fellow Critical Area Ordinance Committee Members:

We are now approaching our forth meeting and I am concerned that we are not making progress. We, as a committee, have not yet created our own work plan. There is no committee agenda for August, and no homework assignment. We have a speaker planned in September, but he is addressing an issue that is not specific to the CAO and GMA compliance. I was unable to obtain group consensus that our goal is to ensure GMA compliance, and that there are agreed upon standards for what constitutes BAS.

We have been entrusted with a difficult and demanding task on behalf of the public and our stakeholders, and I would like to see us make a bigger commitment towards this goal. This requires that we engage in more review and analysis (i.e., do more work) in between our monthly meetings. I know how difficult these critical area provisions are and how quickly the time will fly by.

Staff provided us with some excellent tools and I think we can do a better job of using them. This includes the CAO checklist and GMA Update for critical area review of BAS, as well as a list of staff questions and concerns. But I think that we need a little more background before we begin to tackle these issues. Can we all commit to reading the Critical Area Assistance Handbook, and the 2005 BAS Report (in our binders) before our meeting on the 20<sup>th</sup>?

There are other practical and pressing concerns in this regard. We have been advised that there will be an EIS for the CAO update. This is significant because there is no EIS for the rest of the 2016 Comp. Plan update. It is important that we understand these issues so that we can highlight areas where more clarity or analysis is needed as part of the scoping process. Our concerns can only carry weight if they are timely and informed.

Certain issues are more likely to generate controversy than others, and I believe that we need technical guidance from the TAC. We should be working in conjunction with each other, and they, as technical experts, should be the primary source of updated science. I request that they be convened immediately. I anticipate the following issues will generate conflict and may require a more detailed review:

- Buffers,
- Wetland delineation,
- Landscape planning/ watershed based ecosystem assessments,
- Requirements to protect species and habitat (other than fish),
- New FEMA flood requirements,
- Any parts of the CAO involving water quality and quantity issues,
- GMA compliance,
- Climate change.

I am therefore requesting that the following questions be forwarded to the TAC for consideration. I have included a question for staff, as well.

## **QUESTIONS FOR CAO TECHNICAL ADVISORY COMMITTEE**

1. Will climate change likely impact issues relevant to critical areas? If so, how much and in what way, and are updated studies recommended? Potential topics include whether warmer temperatures and less water will impact:

soil quality, the AG industry; land for housing or industrial development; forestry; flooding and stream meandering, wetlands, habitat and biodiversity; geological hazards; ground water; CARAs; and surface water supplies.

What types of changes would you recommend to address these impacts, if any?

2. Without an updated consultant report to rely upon as we begin reviewing these issues, it is difficult for a citizen committee to determine whether, as a technical matter, the county CAO is in compliance with the GMA and/or whether amendments would be advisable for the 2016 Comp. Plan update.

- Could you please review a sampling of County files for the last 5 to 7 years for SEPA, land use applications (subdivision and building), conditional use permits, shoreline exemptions and permits, and variances, particularly in sensitive watersheds, for analysis?
  - Does it appear that the CAO, as currently drafted, complies with the BAS requirements of the GMA? Where is it strongest and weakest, and would you suggest any amendments?
  - Does it appear that the County is interpreting and implementing the CAO appropriately when processing permits?
- Are you able to determine if there are compliance issues with the general public? (This may be beyond your scope, but many of us have heard this is a serious problem.) If there are compliance issues, are there amendments to the CAO or other Comp. Plan and development regulations that could address the problem?

3. A list of updated BAS since issuance of the 2005 CAO BAS Review and Recommendations for Code Update.

4. Could you please review and weigh in on the county's approach under the new FEMA requirements as it is contrary to the approach recommended by FEMA and enacted by most other jurisdictions. (Rather than use existing regulations and filling in gaps, which maximizes local control, the county has required a more extensive site specific review and analysis by the developer.)

5. Could you please review the county's compliance with HCA requirements? I have found this to be a consistent issue with regard to requiring HCA reports, requiring mitigation, using off-site mitigation standards correctly, using open space to protect habitat and species, and protecting wildlife corridors (except for salmon species.) One suggested example, because it is currently at issue, is the reconveyed Lake Whatcom forest lands. The county has only considered marbled murrelet and eagles, rather than the more extensive species reflected in the HCA, and it has ignored an earlier SEPA statement that it would use a field biologist to determine sensitive habitat.

## **QUESTIONS FOR STAFF**

The GMA Update-Critical Area Review for Best Available Science, (issued Sept. 24, 2009), recommends review and evaluation of the county's compliance status. It asks if any compliance orders have been issued, and if so, if they have been addressed? This is a confusing issue because of the number of issues appealed, some in favor of the county, some in favor of the litigants and some still pending appeal, or awaiting court review. Can we please get a summary on these matters as they affect the CAO so we are all clear on the status and understand how to proceed?

Thank you to everyone for considering my concerns and requests. I would appreciate it if this letter could be posted on our CAO committee website for reference.

<http://www.co.whatcom.wa.us/pds/plan/lr/projects/citizenadvisory.jsp>. I will also be sharing this letter with my stakeholder groups.

Sincerely,

Wendy Harris

## Jessi Roberts

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**From:** WENDY <w.harris2007@comcast.net>  
**Sent:** Thursday, February 04, 2016 9:52 PM  
**To:** Cliff Strong  
**Cc:** Wendy Harris  
**Subject:** CAC and TAC websites

Cliff, I never heard back about the follow-up on the below email and why so many audio tapes of the CAC meetings are not available? Currently, the CAC website incorrectly indicates that these meetings were not recorded, but they were recorded. Only our first meeting was not recorded, so some other explanation needs to be provided.

I have also requested that written submissions by CAC members, other than routine correspondence, be included on the CAC website so that there is record of what members submitted and it will be transparent as to whether the request, analysis, BAS, etc. was reflected in the final product... either the revised CAO or the BAS report. It also provides the public, the council and the planning commission with some understanding of how involved each member was in the committee work in terms of evaluating conflicting testimony or opinion at the public review stage.

I have the same request for the TAC, which frankly, is even more important than the CAC, because that goes to the heart of what BAS was reviewed, discussed and how it was resolved. It will highlight areas of disagreement where it best serves the county council and the planning commission to focus their limited time. Additionally, I think some of the concerns voiced by Wendy S. in her final email are important and need to be considered by the council and PC, particularly as they reflect a similar request I made at the very beginning of the process when I requested that the TAC be convened ASAP.

Thanks,  
Wendy Harris

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**From:** "Cliff Strong" <[CStrong@co.whatcom.wa.us](mailto:CStrong@co.whatcom.wa.us)>  
**To:** "Wendy" <[w.harris2007@comcast.net](mailto:w.harris2007@comcast.net)>  
**Sent:** Thursday, September 10, 2015 11:09:48 AM  
**Subject:** RE: Audio tape for CAC

I'm not sure. I give the recorder to someone to convert after every meeting, but that's all that was in the folder. She's searching back files today.

Thanks,

Cliff Strong

Senior Planner  
Whatcom County Planning & Development Services

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360.778.5942 ←**Note new phone number**

[www.co.whatcom.wa.us/pds](http://www.co.whatcom.wa.us/pds)

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**From:** Wendy Harris [<mailto:w.harris2007@comcast.net>]

**Sent:** Wednesday, September 09, 2015 2:43 AM

**To:** Cliff Strong

**Subject:** Audio tape for CAC

Hi Cliff. I was wondering what happened to the audio tape for 7 of the CAC meetings. I know there was no tape of the first meeting, but I thought every meeting after that was going to be recorded?

Thanks, Wendy



## Jessi Roberts

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**From:** w.harris2007@comcast.net  
**Sent:** Wednesday, June 11, 2014 1:29 AM  
**To:** Cliff Strong  
**Subject:** Best Available Science | Update on Wetland Buffers | Washington Department of Ecology

**Follow Up Flag:** Follow up  
**Flag Status:** Completed

<https://fortress.wa.gov/ecy/publications/SummaryPages/1306011.html>

This is the most updated science on wetland buffers, but does not discuss how to incorporate this information into a CAO, and DOE is not updating its buffer width guidelines. Based on my review, many concerns and questions focus on wildlife issues, and in many instances, not enough it known.

Wendy

## Jessi Roberts

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**From:** WENDY <w.harris2007@comcast.net>  
**Sent:** Friday, February 05, 2016 3:03 AM  
**To:** Cliff Strong  
**Cc:** Wendy Harris  
**Subject:** CPAL, CARA and my written studies and position

Cliff: Thank you for including 4 of the 6 items I submitted as BAS for CPAL provisions. I appreciate that.

However, this does not reflect my opinion, formed after review of these materials, that livestock operations are not appropriate for the CPAL program. BMP's can not be substituted for the mandatory use of BAS where it is clear that they are not protecting the ground water quality. The North County reflects some of the worst nitrate contamination in drinking wells in our state and the submitted information reflects the connection between ground water contamination and farming activities. (I can also submit maps that clearly illustrate this if you like.) Some of these dairies will be required to obtain CAFO permits and are subject to NPDES permits. In other words, they can be source of pathogenic disease and ecosystem degradation if not closely managed and monitored, something that exceeds the scope of the CPAL program. Additionally, although not reflected in this email, I made oral statements regarding the failure of the staff to review farm plans with the level of detail that is required under the local code, which I discovered through a public records request. I do not see any of these concerns in the BAS report.

Finally, I would like to have the two remaining studies I submitted added to the BAS report, including the 2012 EPA study, Case Studies on the Impact of Concentrated Feeding Operations (CAFOs) On Ground Water Quality, Stephen R. Hutchins, Mark V. White, and Susan C. Mravik, Office of Research and Development; Ground Water and Ecosystems Restoration Division. Although it reviewed a number of larger animals operations in OK, the issues it addressed were universal to the livestock industry and this was a very thorough and well done study. "Collectively, these data show that ground water contamination by nitrate or ammonium can occur at very different types of CAFOs, whether through leaking lagoons, leaking pipes or infrastructure, land application of wastes in excess of agronomic needs, or other factors." More importantly, it indicated that this is an area of science that requires much better development such that it would not be appropriate to rely upon BMPs. "much more work is needed to evaluate the efficacy of currently accepted nutrient management strategies (BMPs) for ground water protection from contamination from nutrients and other stressors, and to ascertain whether additional guidance or regulatory concerns are needed." Page 96. This goes directly to the heart of my concern regarding the use of the CPAL program for livestock.

The final study by Cox and Kahle reflects the sources of nitrates in the Sumas aquifer. This report was prepared in cooperation with the Whatcom County Planning Department as noted on the title page. U.S. Geological Survey, Water-Resources Investigations Report 98-4195, Cox and Kahle, Hydrogeology, ground water quality, and sources of nitrate in lowland glacial aquifers of Whatcom County, Washington, and British Columbia, Canada, 1999. This lengthy study and report is essential for both CARAs and farm plans. It establishes that the problem is long standing, and provides great detail, including the presence of specific pesticides. Tons of manure deposited per year was estimated, as was the rate of manure seepage, and it puts to rest disputes over the real source of nitrate contamination. It indicates that closer review of residential sources of nitrates is necessary, although the overwhelming source is the application of manure.

"Potential sources of nitrate in the ground water of the study area include dairy and poultry farming; fertilizers applied to croplands, lawns and gardens; residential septic systems; irrigation with ground water containing nitrates; land disposal of municipal biosolid wastes; and naturally occurring soil nitrogen, peat materials, and precipitation. About 75 percent of the area is used for agricultural activities, and evaluation of nitrate loading to ground water from these activities indicates that land application of manure, manure storage, and the use of fertilizers contribute the greatest quantities of nitrate. Residential sources contribute about 6 to 7 percent of total nitrogen input to ground water, but because this often occurs near areas where domestic wells are located, the impact of residential nitrate sources on concentrations of nitrates in some well water may be large. Even though agricultural sources contribute much larger quantities of nitrate to ground water than do residential sources, on a per-acre basis the rate of nitrate entering ground water from agricultural sources is about 1.5 to 3 times larger than for residential sources."

"Agricultural activities , which are the predominant land use in about 75 percent of the study area and include the largest individual potential nitrate sources, account for about 85 to 88 percent of the total estimated nitrogen input to ground water. In the estimate made here, the largest single source of nitrate loading to ground water is the application of dairy manure to pastures and croplands, which is estimated to account for 34 percent of the total nitrate input; if nitrate inputs from mineralization are assumed to be zero, dairy manure applied to croplands accounts for 42 percent of the total nitrate load to ground water. Seepage from manure lagoons is estimated to contribute another 12 to 14 percent of the total nitrogen input, or about one-third of the loading resulting from land application of manure. Together, estimates of land applications and storage of dairy manures account for over half of the total input of nitrogen to ground water." It was estimated that on average, farming loads 45 pounds of nitrates per acre

annually in this aquifer. Additional residential and agricultural expansion was anticipated to make this problem worse.

In reviewing the studies I have cited for drafting this comment, it does not appear that the CPAL or CARA provisions are adequate to protect ground water quality. We are still applying tons of manure to field crops, based on the honor system. We still fail to line the manure lagoons. It is clear the BMPs that are being followed were, and continue to be, inadequate as the problem is not improving. Nor are we attempting to restrict any of the pesticides that were determined to be present in the ground water. It is not clear to me how any of this complies with GMA requirements. I think it would be wise to reconvene the TAC to review this situation. But regardless, I request that all my BAS be included in your report, as well as the positions that I previously articulated.

Thank you,  
Wendy.

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

**Sent:** Wednesday, December 16, 2015 3:56 AM

**To:** Audrey Borders; David Haggith; Wes Kentch; Roger Almskaar; Laura Sachs; Wendy Harris; Kate Blystone; Watson, Virginia; Strong, Cliff; Mark Personius

**Cc:** Steffensen, Wendy; Oliver Grah; Meyer, Susan (ECY); Kara Kuhlman; McShane, Dan

**Subject:** Submission of BAS and need to exclude livestock for CPAL

I request the following reports be accepted as updated BAS for the CAO update. There have been statements made by committee members that there is no evidence that any harmful impacts result from agricultural activities and that is categorically false as reflected in scientific studies.

Additionally, this information suggests that AG operations involving livestock have the potential for substantial harm to human health and the environment, particularly water quality. Adequate protection requires a high level of review, regulation and scrutiny, making livestock farming inappropriate for the CPAL program.

EPA Case Studies on the Impact of Concentrated Animal Feeding Operations (CAFOs) on Ground Water Quality, EPA 820-R-13-002, July, 2013. Seven studies on different types of CAFOs established each was a source of nitrate contamination of

ground water through isotope studies. The source of the nitrates were leaking pipe infrastructure, leaking lagoons, or improper application of manure on the ground.

EPA, Risk Assessment Evaluation for Concentrated Animal Feeding Operations, EPA/600/R-04/042, May, 2004. This report is an exhaustive review of the numerous ways that CAFO's pose health risks to water quality, air quality, and provide a vector to human disease, and different management practices that are in place. It concludes that more study is needed to determine what management practices will be the most protective.

In the below report, the EPA highlighted a number of health impacts related to CAFO's. A primary concern was the use of manure lagoons, which all leak, but at different rates depending on the construction. NPDES regulations do not specifically require the use of liners for manure lagoons, but it would likely reduce the rates of leakage of nitrates and ammonia contaminating ground water. The report concludes that "much more work is needed to evaluate the efficacy of currently accepted nutrient management strategies (BMPs) for ground water protection from contamination from nutrients and other stressors, and to ascertain whether additional guidance or regulatory concerns are needed." Page 96.

<b>EPA</b>	600R12052
<b>pubnumber</b>	
<b>title</b>	Case Studies on the Impact of Concentrated Animal Feeding Operations (CAFOs) on Ground Water Quality
<b>pages</b>	265
<b>pubyear</b>	2012
<b>provider</b>	NEPIS
<b>access</b>	online
<b>origin</b>	PDF

The above BAS from EPA indicates that BMPs can not be relied up to protect public health and ecosystem function with regard to livestock farming. The county's CPAL program is based upon the use of BMP. As such, it not only violates the requirement to use BAS, but the BMPs are not adequately established to ensure protection of ecosystem function and value. Livestock operations are not appropriate for inclusion in the CPAL program.

In addition, a 2012 study by DOE documented the extensive history of nitrate contamination to ground water in the Blaine Sumas aquifer. Department of Ecology, Carey, B. and R. Cummings, Sumas-Blaine Aquifer Nitrate Contamination Summary, Pub. No. 12-03-026, June, 2012. [www.ecy.wa.gov/biblio/1203026.html](http://www.ecy.wa.gov/biblio/1203026.html):

See also:

Cox, S. E. and S. C. Kahle, 1999. Hydrogeology, ground water quality, and sources of nitrate in lowland glacial aquifers of Whatcom County, Washington, and British Columbia, Canada. U.S. Geological Survey Water-Resources Investigations Report 98-4195. 251 pages, 5 plates.

Redding, M., B. Carey, and K. Sinclair, 2011. Poster: Nitrate Contamination in the Sumas-Blaine Aquifer, Whatcom County, Washington. Presented at the Eighth Washington Hydrogeology Symposium on April 26, 2011, in Tacoma WA. Washington State Department of Ecology, Olympia, WA. Publication No. 11-03-027. [www.ecy.wa.gov/biblio/1103027.html](http://www.ecy.wa.gov/biblio/1103027.html)

## Jessi Roberts

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**From:** WENDY <w.harris2007@comcast.net>  
**Sent:** Friday, October 03, 2014 5:27 PM  
**To:** Jack Louws  
**Cc:** Cliff Strong; Mark Personius  
**Subject:** Concerns, Disappointment and Proof

Dear Jack; I am concerned to learn that you are contacting each member of the CAO citizen advisory committee to discuss with them whether they believe that I have been rude, disrespectful or disruptive at meetings. It is hard for me to imagine how anyone could allege, in good faith, that I engaged in conduct so unbecoming that it warrants a full investigation and report by the County Executive. Does the outcome of your investigation even matter at this point? My reputation and credibility will be damaged by the gossip generated from this unprecedented action. I am mindful that this does not just reflect poorly on me, but also reflects on the organizations that authorized me to represent them in a public forum.

You must be aware that I have political opponents who would gladly see me silenced. I am left disillusioned in the value of participating in the public process if eight years of appropriate conduct and informed participation stands for nothing. Our conversation, where I described the internal fighting regarding property rights issues, should have been enough to resolve this issue. The real disrespect is shown by those on the citizen advisory committee who are interested only in forwarding a property rights agenda. I am at a loss to understand why you would question my motives when I have nothing to gain financially, remain involved despite poor health, and have advocated from the very beginning that we achieve GMA compliance.

I am providing relevant evidence in the form of three emails. I sent the first email in an attempt to get the process moving forward and to highlight areas of special concern. I addressed questions for the Technical Advisory Committee and for staff, and requested that my letter be posted on the CAO CAC website. This was not done. I am including an email response from a member of the citizen advisory committee, taking offense, accusing me of being disrespectful, making a personally disparaging remark, and requesting that my email comments not be made public. Frankly, I was floored by this response. The third email is my response to the the second email. I certainly hope this helps clarify for you the unhealthy dynamics of this committee, as well as my attempt to conduct myself in a professional manner. To tag me as the sole source of the problem with this committee is unconscionable.

Sincerely,  
Wendy Harris

-----Original Message-----

From: w.harris2007 <w.harris2007@comcast.net>  
To: Sachs, Laura <laurabsachs@gmail.com>  
Cc: Borders, Audrey <msqlty@gmail.com>; Kentch, Wes <wwkentch@comcast.net>; Watson, Virginia <vwilkenswatson@aol.com>; Blystone, Kate <kateb@re-sources.org>; Haggith, David <dhaggithn3@frontier.com>; Strong, Cliff <cstrong@co.whatcom.wa.us>; Personius, Mark <MPersoni@co.whatcom.wa.us>; jack louws <jlouws@co.whatcom.wa.us>  
Sent: Mon, Aug 11, 2014 9:30 pm  
Subject: Re: CAC work plan and TAG request

Laura: I am sorry you took offense at my memo. It was written in a good faith attempt to move us forward, based on the last 3 and the next two meetings. It was certainly not my intent to point fingers at any one in particular, so I am disappointed that you used this as an opportunity to cast dispersions against me. The best way to ensure that the record reflects a functional and cooperative group is for us to work well with each other. That is my hope moving forward.

For future reference, everything that we write as members of this committee are considered a public record, and therefore, are appropriate for posting on the committee website, and are also part of record for the 2016 Comp. Plan update process. That would include your letter in response to me. Under the Washington Public Records Act, no committee member has the legal authority to censor or redact statements made by another, and in the interests of transparency, I hope that no one would want to.

Wendy Harris

**From:** "Sachs, Laura" <[laurabsachs@gmail.com](mailto:laurabsachs@gmail.com)>  
**To:** "Harris, Wendy" <[w.harris2007@comcast.net](mailto:w.harris2007@comcast.net)>  
**Cc:** "Borders, Audrey" <[msqlty@gmail.com](mailto:msqlty@gmail.com)>, "Kentch, Wes" <[wwkentch@comcast.net](mailto:wwkentch@comcast.net)>, "Watson, Virginia" <[vwilkenwatson@aol.com](mailto:vwilkenwatson@aol.com)>, "Blystone, Kate" <[kateb@re-sources.org](mailto:kateb@re-sources.org)>, "Haggith, David" <[dhaggithn3@frontier.com](mailto:dhaggithn3@frontier.com)>, "Strong, Cliff" <[cstrong@co.whatcom.wa.us](mailto:cstrong@co.whatcom.wa.us)>, "Personius, Mark" <[MPersoni@co.whatcom.wa.us](mailto:MPersoni@co.whatcom.wa.us)>  
**Sent:** Monday, August 11, 2014 7:59:19 PM  
**Subject:** Re: CAC work plan and TAG request

Wendy,

We all realize that we are approaching our fourth, and therefore forth meeting as you write. Due to unfortunate circumstances, I have only made it to the first of our three meetings which you were not present so I don't have the experience of meeting you. You have been to two meetings.

I would like to let you know that as an executive for state and corporate operations for over 20 years and having a degree in Speech Communications from WWU, I never found it to be productive or effective to approach concerns in the manner that you have chosen and I hope our next meeting can set the ground rules so that we can work together in the most effective and efficient manner possible. I don't disagree with some of your points including that this assignment calls for us to do far more than just attending meetings. Can you honestly tell me that you read the entire handbook and links and resources and laws? I have read our notebook but I know that I need more information and more time to absorb all of the information in order to be objective and intelligent in my comments. I have let Cliff know that I am summarizing my concerns and questions regarding the regulations and information we have been provided before our next meeting.



I can tell you in all honesty that your email comes across as condescending and disrespectful for those of us just as committed as you to the objectives of this committee. In researching your background, I hope that your political and personal aspirations do not get in the way of our goals.

I feel like I have read the notebook and need to read many parts again and all of the referenced materials which I have not completely researched.

I do not think your memo should be posted to our site as it shows dissention and frustration from a member going to two meetings.

Regards,

Laura Sachs

On Sun, Aug 10, 2014 at 7:57 PM, <[w.harris2007@comcast.net](mailto:w.harris2007@comcast.net)> wrote:

Dear fellow Critical Area Ordinance Committee Members:

We are now approaching our forth meeting and I am concerned that we are not making progress. We, as a committee, have not yet created our own work plan. There is no committee agenda for August, and no homework assignment. We have a speaker planned in September, but he is addressing an issue that is not specific to the CAO and GMA compliance. I was unable to obtain group consensus that our goal is to ensure GMA compliance, and that there are agreed upon standards for what constitutes BAS.

We have been entrusted with a difficult and demanding task on behalf of the public and our stakeholders, and I would like to see us make a bigger commitment towards this goal. This requires that we engage in more review and analysis (i.e., do more work) in between our monthly meetings. I know how difficult these critical area provisions are and how quickly the time will fly by.

Staff provided us with some excellent tools and I think we can do a better job of using them. This includes the CAO checklist and GMA Update for critical area review of BAS, as well as a list of staff questions and concerns. But I think that we need a little more background before we begin to tackle these issues. Can we all commit to reading the Critical Area Assistance Handbook, and the 2005 BAS Report (in our binders) before our meeting on the 20<sup>th</sup>?

There are other practical and pressing concerns in this regard. We have been advised that there will be an EIS for the CAO update. This is significant because there is no EIS for the rest of the 2016 Comp. Plan update. It is important that we understand these issues so that we can highlight areas where more clarity or analysis is needed as part of the scoping process. Our concerns can only carry weight if they are timely and informed.

Certain issues are more likely to generate controversy than others, and I believe that we need technical guidance from the TAC. We should be working in conjunction with each other, and they, as technical experts, should be the primary source of updated

science. I request that they be convened immediately. I anticipate the following issues will generate conflict and may require a more detailed review:

- Buffers,
- Wetland delineation,
- Landscape planning/ watershed based ecosystem assessments,
- Requirements to protect species and habitat (other than fish),
- New FEMA flood requirements,
- Any parts of the CAO involving water quality and quantity issues,
- GMA compliance,
- Climate change.

I am therefore requesting that the following questions be forwarded to the TAC for consideration. I have included a question for staff, as well.

### **QUESTIONS FOR CAO TECHNICAL ADVISORY COMMITTEE**

1. Will climate change likely impact issues relevant to critical areas? If so, how much and in what way, and are updated studies recommended? Potential topics include whether warmer temperatures and less water will impact:

soil quality, the AG industry; land for housing or industrial development; forestry; flooding and stream meandering, wetlands, habitat and biodiversity; geological hazards; ground water; CARAs; and surface water supplies.

What types of changes would you recommend to address these impacts, if any?

2. Without an updated consultant report to rely upon as we begin reviewing these issues, it is difficult for a citizen committee to determine whether, as a technical matter, the county CAO is in compliance with the GMA and/or whether amendments would be advisable for the 2016 Comp. Plan update.

- Could you please review a sampling of County files for the last 5 to 7 years for SEPA, land use applications (subdivision and building), conditional use permits, shoreline exemptions and permits, and variances, particularly in sensitive watersheds, for analysis?
  - Does it appear that the CAO, as currently drafted, complies with the BAS requirements of the GMA? Where is it strongest and weakest, and would you suggest any amendments?
  - Does it appear that the County is interpreting and implementing the CAO appropriately when processing permits?
- Are you able to determine if there are compliance issues with the general public? (This may be beyond your scope, but many of us have heard this is a serious problem.) If there are compliance issues, are there amendments to the CAO or other Comp. Plan and development regulations that could address the problem?

3. A list of updated BAS since issuance of the 2005 CAO BAS Review and Recommendations for Code Update.

4. Could you please review and weigh in on the county's approach under the new FEMA requirements as it is contrary to the approach recommended by FEMA and enacted by most other jurisdictions. (Rather than use existing regulations and filling in gaps, which maximizes local control, the county has required a more extensive site specific review and analysis by the developer.)

5. Could you please review the county's compliance with HCA requirements? I have found this to be a consistent issue with regard to requiring HCA reports, requiring mitigation, using off-site mitigation standards correctly, using open space to protect habitat and species, and protecting wildlife corridors (except for salmon species.) One suggested example, because it is currently at issue, is the reconveyed Lake Whatcom forest lands. The county has only considered marbled murrelet and eagles, rather than the more extensive species reflected in the HCA, and it has ignored an earlier SEPA statement that it would use a field biologist to determine sensitive habitat.

### **QUESTIONS FOR STAFF**

The GMA Update-Critical Area Review for Best Available Science, (issued Sept. 24, 2009), recommends review and evaluation of the county's compliance status. It asks if any compliance orders have been issued, and if so, if they have been addressed? This is a confusing issue because of the number of issues appealed, some in favor of the county, some in favor of the litigants and some still pending appeal, or awaiting court review. Can we please get a summary on these matters as they affect the CAO so we are all clear on the status and understand how to proceed?

Thank you to everyone for considering my concerns and requests. I would appreciate it if this letter could be posted on our CAO committee website for reference.

<http://www.co.whatcom.wa.us/pds/plan/lr/projects/citizenadvisory.jsp>. I will also be sharing this letter with my stakeholder groups.

Sincerely,  
Wendy Harris

**Jessi Roberts**

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**From:** WENDY <w.harris2007@comcast.net>  
**Sent:** Monday, November 03, 2014 8:41 PM  
**To:** Cliff Strong  
**Subject:** CNW biodiveristy study

I have been reminded by a few people, including Council Member Weimer, that Conservation Northwest did a biodiversity study for the county. Carl stated that he checked with PDS, and that study this is currently available through PDS. Could you please provide the CAC and the TAC with an email copy of this CNW study?

Thanks for your time and assistance.

Wendy Harris.

## Jessi Roberts

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**From:** w.harris2007@comcast.net  
**Sent:** Monday, August 11, 2014 10:26 PM  
**To:** Sachs, Laura  
**Cc:** Borders, Audrey; Kentch, Wes; Watson, Virginia; Blystone, Kate; Haggith, David; Cliff Strong  
**Subject:** clarification

For sake of clarity, my suggestion was to read the Critical Area Assistance Handbook, from Commerce, and the 2005 BAS Review, both of which are in our binders, because they provide an overview of critical areas that I thought would provide helpful background before we tackled the technical and legal provisions of the CAO and Comp. Plan Chapter.

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**From:** "Sachs, Laura" <laurabsachs@gmail.com>  
**To:** "Harris, Wendy" <w.harris2007@comcast.net>  
**Cc:** "Borders, Audrey" <msqlty@gmail.com>, "Kentch, Wes" <wwkentch@comcast.net>, "Watson, Virginia" <vwilkenwatson@aol.com>, "Blystone, Kate" <kateb@re-sources.org>, "Haggith, David" <daggithn3@frontier.com>, "Strong, Cliff" <cstrong@co.whatcom.wa.us>, "Personius, Mark" <MPersoni@co.whatcom.wa.us>  
**Sent:** Monday, August 11, 2014 7:59:19 PM  
**Subject:** Re: CAC work plan and TAG request

Wendy,

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each other, and they, as technical experts, should be the primary source of updated science. I request that they be convened immediately. I anticipate the following issues will generate conflict and may require a more detailed review:

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<http://www.co.whatcom.wa.us/pds/plan/lr/projects/citizenadvisory.jsp>. I will also be sharing this letter with my stakeholder groups.

Sincerely,

Wendy Harris



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Laura B. Sachs  
3523 South Bay Drive  
Sedro Woolley, WA 98284  
360-595-2329 T  
202-538-2883 C

## Jessi Roberts

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**From:** PDS\_Planning\_Commission  
**Sent:** Monday, August 17, 2015 9:33 AM  
**To:** Cliff Strong  
**Cc:** Mark Personius  
**Subject:** FW: Justification for departure from BAS in CAO exemption for low impact activities (hunting, hiking canoeing , etc.)

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**From:** WENDY [mailto:w.harris2007@comcast.net]  
**Sent:** Sunday, August 16, 2015 7:39 PM  
**To:** PDS; PDS\_Planning\_Commission; Council  
**Cc:** Wendy Steffensen", "Dan McShane", "Oliver Grah" <ograh@nooksack-nsn.gov>, "Pete Sim" <Pete.Sim@bp.com>, "Ryan Ericson" <Ryan@futurewise.org>, "Susan Meyer" <sume461@ecy.wa.gov>, "Kara Kuhlman" <KaraK@lummi-nsn.gov>, "Joel Ingram" <Joel.Ingram@dfw.wa.gov>, "David Haggith" <dhaggithn3@frontier.com>, "Kate Blystone" <kateb@re-resources.org>, "Laura Sachs" <laurabsachs@gmail.com>, "Mark Personius" <MPersoni@co.whatcom.wa.us>, "Audrey Borders" <msqlty@gmail.com>, "Roger Almskaar" <almskaarr@comcast.net>, "Virginia"  
**Subject:** Justification for departure from BAS in CAO exemption for low impact activities (hunting, hiking canoeing , etc.)

### To Whatcom County Planning and Development Services:

Reference is made to my prior requests to the county, CAC and TAC regarding CAO exemptions for passive low impact activities (an email request is included below). I documented the science establishing significant harmful impacts from "low impact activities" including hiking, canoeing, wildlife viewing, nature study, photography, hunting and fishing, which included the information and science from the last county BAS report and update in 2005. As the CAO advisory committees winds down their review process, it is clear that they will not be recommending any changes to these provisions, and that they will be forwarding a recommendation to the planning commission with this provision unchanged.

The only excuse I have heard provided (and that was off the record) is that the county does not regulate these activities under the CAO. If that is the case, then it has no business listing and exempting these activities as part of the CAO provisions in the first place, where this will be used to justify things like trails within buffers and critical areas without any mitigation, as an accommodation of an exempt activities. Once the county creates the CAO exemption, it bears the burden of justifying its departure from BAS.

In my below email, I requested that if this provision remains in the CAO, in contradiction of BAS, I would like the county to meet its burden of providing the information in the record that supports this departure, explains your rationale for departing from science-based recommendations and identifies 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.

**Please accept this as my second request to provide your rationale for departing from BAS and the alternative means by which you will provide equal or greater protection of the functions and values of critical areas and the ecosystems of which they are a part. I hope that you will have this available in time for the Planning Commission review of the CAO.**

Thank you in advance for your anticipated response to this inquiry. Please enter this email into the official record for the 2015 Comp. Plan update.

Sincerely,

Wendy Harris, Whatcom County resident

P.S. I am aware the Ryan Ericksen will begin his county employment this week, but I do not have his new county email address. Could you please forward this to him in his new role as county shoreline planner?

Prior Comment:

COB: CAO Exemptions For Passive Low Impact Activities

**I request that the county delete its current exemption in the CAO for “low impact activities such as hiking, canoeing, viewing, nature study, photography, hunting, fishing, education or scientific research. WCC16.16.230.C.**

The exemption is contrary to BAS, as reflected in the county’s last BAS study and numerous independent studies and does not comply with state and federal guidelines for protecting wildlife. Hunting, in particular, is inappropriate to exempt. Therefore, the exemption does not comply with the requirements in the GMA for habitat conservation areas.

Unfortunately, most people and indeed, most planners, are unaware of these harmful impacts. Public education has been shown to have a beneficial affect, countering the underestimation of impacts by most outdoor recreational users, and I suggest that the county educate the public on impacts, rather than exempt these activities from critical area compliance. Additionally, exempting these activities prevents appropriate and necessary mitigation.

### **Best Available Science**

#### Whatcom County BAS Report (2005)

The Whatcom County Planning and Development Services BAS Code Recommendations Report, from the last comp. plan update in 2005, clearly reflects human presence as having harmful impacts on animal behavior, the severity of which depends on the species, the size of the disturbed area, the timing of the disturbance, and duration of the disturbance, as well as the distance of the human activity, which is a function of buffer width. (Page 6-16,17; See also Table 6-5.)

In Chapter 7 of the report, other examples of harmful impacts from outdoor recreation include flushing from breeding or foraging areas, interference with courtship, and potential increased susceptibility to predation. Certain species are highlighted as being intolerant of human activities such as marbled murrelets, nesting alcids, northern goshawk, and great blue herons. In Table 7-6, the report reflects harmful impacts from recreational activities on aquatic habitat, resulting in degraded water quality and increased contact with listed species. (page 7-18.) Finally, the report cites several studies to document these assertions, including:

Claar, J.J., N. Anderson, D. Boyd, M. Cherry, B. Conard, R. Hompesch, S. Miller, G. Olson, H. Ihsle Pac, J. Waller, T. Wittinger, H. Youmans. 1999. Carnivores. Pages 7.1– 7.63 *in*: Joslin, G. and H. Youmans, coordinators. Effects of recreation on Rocky Mountain wildlife: A review for Montana.

Committee on Effects of Recreation on Wildlife. Montana Chapter of The Wildlife Society, Bozeman, Montana.

Dahlgren, R.B. and C.E. Korschgen. 1992. Human disturbances of waterfowl: an annotated bibliography. U.S. Fish and Wildlife Service Resource Publication 188. Jamestown, North Dakota: Northern Prairie Wildlife Research Center Home Page. Online version available at:<http://www.npwrc.usgs.gov/resource/literatr/disturb/disturb.htm> (Version 16JUL97). Accessed July 12, 2004.

The report notes the importance of adequate buffer widths, adequately sized habitat patches, and adequate habitat corridors (sufficient ground cover and width based on adjacent human activity and land use.) This establishes the need to ensure proper mitigation for outdoor recreation to protect wildlife and habitat, making a blanket exemption inappropriate.

### Hunting, Fishing and Trapping

Consumptive outdoor recreation, which includes hunting, fishing and trapping, is a well documented cause of great harm to wildlife, including species extermination. It has significant and severe impacts on healthy ecosystem function because it targets apex predators and trophy animals that perform important ecological services, as well as “nuisance” animals that may play an important role in the local ecosystem. Killing wildlife that is protected under the GMA and the CAO must be strictly regulated. That is a primary purpose for establishing habitat conservation areas (HCA).

Cole, David N.; Knight, Richard L. 1990. Impacts of recreation on biodiversity in wilderness. In: Wilderness areas: their impacts; proceedings of a symposium; 1990 April 19-20; Logan, UT. Logan, UT: Utah State University 33-40pp.

Abstract:

We discuss seven recreational impacts on biodiversity in wilderness areas. These include: (1) construction of trails, (2) trampling of vegetation and soils on trails and campsites, (3) collection and burning of wood in campfires, (4) water pollution associated with camping activities, (5) unintentional harassment of animals, (6) hunting, fishing, and associated management programs, and (7) grazing by recreational packstock. All of these activities can be considered detrimental because they alter the natural processes and functions of ecosystems. **The activities which have caused the greatest impact on diversity at a regional scale are fishing, hunting, and associated management practices.**

Robert Steidl and Brian Powell, Assessing the Impacts of Human Activities On Wildlife, “Human activities that affect wildlife and their habitat are pervasive and increasing. Effects are manifested at all ecological scales, from short term changes in behavior of an individual animal through extirpations and global extinctions. (citation provided.) Consequently, understanding the affects of humans on wildlife and wildlife populations, as well as devising strategies to ameliorate these effects is an increasing challenge for resource managers. ..”

### Outdoor Recreational Activities

The federal Fish and Wildlife Service has determined that outdoor recreational activities are the fourth leading cause of loss in biodiversity. In fact, 27% of federal endangered, threatened, or proposed listed species are harmed by outdoor recreation, including ORVs. (Wilcove et al. 1998).

New York Times Opinion Piece, “Leaving Only Footsteps? Think Again.” February 13, 2015, citing various research over the last 15 years. [http://www.nytimes.com/2015/02/15/opinion/sunday/leaving-only-footsteps-think-again.html?\\_r=0](http://www.nytimes.com/2015/02/15/opinion/sunday/leaving-only-footsteps-think-again.html?_r=0)

“Impacts from outdoor recreation and tourism are the fourth-leading reason that species are listed by the federal government as threatened or endangered, behind threats from nonnative species, urban growth and agriculture. “

“Outdoor Recreation Can Impact Wildlife”, March 6, 2015, article discussing study results at <http://daily.jstor.org/outdoor-recreation-impacts-wildlife/> .

And study results at

[http://www.jstor.org/stable/4134735?mag=outdoor-recreation-impacts-wildlife&seq=1#page\\_scan\\_tab\\_contents](http://www.jstor.org/stable/4134735?mag=outdoor-recreation-impacts-wildlife&seq=1#page_scan_tab_contents),

Any number of other studies can be cited reflecting harmful impacts from outdoor recreation: Taylor, Audrey R. and Knight, Richard L. 2003. Wildlife Responses to Recreation and Associated Visitor Perceptions. *Ecological Applications* 13(4):951 - 963.

Trampling, the most prevalent recreation impact process, damages and kills plants, displaces soil organic horizons, and compacts mineral soils. These immediate, direct trampling effects, in turn, have additional longer lasting and cascading effects (Liddle, 1997). Models of trampling effects often contain positive feedback loops. For example, trampling eliminates vegetation cover, which reduces inputs of organic matter and root exudates into the soil. Along with the physical effects of soil compaction, this alters the microorganisms that live in the soil. Since soil microorganisms are critically important both to the alleviation of soil compaction and the establishment and growth of vegetation, soil and vegetation are further altered by these changes to the soil biota. Consequently, sites can remain compacted and barren, even in the absence of further trampling.

Zabinski and Gannon (1997) have documented reductions in the functional diversity of microbial populations growing on campsites and Belnap (1996) has shown that disturbance of surface cyanobacterial-lichen soil crusts reduces nitrogenase activity and, therefore, alters nitrogen cycles.

Cole, David N.; Landres, Peter B. 1995. Indirect effects of recreation on wildlife. In: Knight, Richard L.; Gutzwiller, Kevin J., eds. *Wildlife and Recreationists--Coexistence Through Management and Research*. Washington, DC: Island Press Chapter 11, 183-202.

Leopold Publication Number **265**

Provides a broad overview of the indirect influences that recreation has on wildlife. Recreational activities can change the habitat of an animal. This, in turn, affects the behavior, survival, reproduction, and distribution of individuals. Although more difficult to isolate and study, these indirect impacts may be as serious and long lasting as direct impacts for species.

Papouchis, Christopher M. and Singer, Francis J. and Sloan, William. 2001. Responses of Desert Bighorn Sheep To Increased Human Recreation. *Journal of Wildlife Management* 65(3):573 - 582.

Spahr, Robin. 1990. *Factors Affecting The Distribution Of Bald Eagles And Effects Of Human Activity On Bald Eagles Wintering Along The Boise River*. Boise State University.

One of the best local sources of documentation is found in the city of Bellingham's 1995 Wildlife and Habitat Assessment by Nahkeeta Northwest, (Ann Eissinger) beginning on page 21. Eissinger references the 1985 work of Boyle and Samson in reviewing the data from 166 studies establishing harmful impacts from hiking, camping, fishing, boating, wildlife observation, photography, swimming, and on-shore recreation, with regard to birds, mammals and plants. Negative impacts range from trampling vegetation, disturbance, displacement of animals from trails, nest losses through predation, nest abandonment, loss of shoreline habitat, air/water/noise pollution and local species extinction.

Recommendations, incorporated by reference into the COB Wildlife and Habitat Assessment, suggest separating wildlife and recreation as much as possible by managing specifically for wildlife in certain

areas, providing large areas of continuous habitat for area sensitive species and designating certain areas for recreation or “sacrifice areas.” The city has failed to act on these recommendations.

### Protection, Not Exemption

Of all 5 types of critical areas that require protection, HCA remains the least protected and least considered. The city, like the county, assumes that recreational areas protect wildlife regardless of species need for habitat, vegetated travel corridors and the presence or buffers. As a result, wildlife and habitat have been irreplaceably lost, in violation of GMA requirements.

The County BAS report reflects the failure to establish adequate buffers, habitat corridors and limitations on human activity during certain sensitive times of the year, species dependent. As you know, residents of this community greatly value our local wildlife, and after walking, list wildlife watching as the most favored reason to visit county parks. We must love our wildlife in a way that also protects and sustains it. This requires management policies and currently, the county has none.

The county lacks an updated wildlife and habitat analysis (a real one, with on-site review and analysis by a field biologist), baseline standards to determine if development is causing harm, wildlife management policies to promote biodiversity, and policies to determine whether, where and how land is to set aside for wildlife, how to avoid human/wildlife conflicts, under what circumstances it is appropriate to exterminate wildlife, and to establish a public process for reviewing these issues. Currently, these issues are determined on project and site specific basis by, most often, the Parks Department, managed by someone who has expressed hostility to wildlife. My concerns are addressed primarily to non-fish species, such as birds and terrestrial species.

### Conclusion

All of these facts make it inappropriate to exempt consumptive activities such as hunting or fishing and this exemption must be revoked. Even non-consumptive “low impact activities” such as hiking, canoeing, viewing, nature study, and photography have impacts and should not be exempted from CAO regulation because this could prevent the consideration of appropriate mitigation and intensity of use impacts, as is currently happening with the new Lake Whatcom Park.

With regard to education and scientific research, which is also included in the exemption, anything that involves the presence of people has some form of impact. For example, a study to document species A may not consider the impacts to species B, C and D. Instead, I recommend that education and scientific research be exempted under a case by case review by the Planning Director.

### Request to Show Your Work

If the county chooses not to make this revision, in contradiction of BAS, please provide the information in the record that supports this departure, 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.

Sincerely,

Wendy Harris, Member of the CAO Citizen Advisory Committee.

**Jessi Roberts**

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**From:** WENDY <w.harris2007@comcast.net>  
**Sent:** Wednesday, September 17, 2014 3:21 PM  
**To:** Cliff Strong; Wes Kentch; Roger Almskaar; David Haggith; Mark Personius; Kate Blystone; Watson, Virginia  
**Subject:** FEMA issues

**From Wendy Harris**

**To CACAC**

**Re: Updated science and policy for floodplains/FEMA and comp. plan update for 2016**

**Date 7.17.14**

In 2008, the NOAA Fisheries Service issued a Biological Opinion establishing significant harmful impacts to Puget Sound fish, wildlife and habitat that result from floodplain development. NOAA's Fisheries Service determined that it was the broad availability of federal flood insurance in Puget Sound that stimulated development in the floodplains, increasing loss of floodplain species and habitats. The Biological Opinion constitutes BAS developed since the last CAO update and should be included in our current review.

[www.fema.gov/media-library/assets/documents/30021](http://www.fema.gov/media-library/assets/documents/30021).

Changes are required to the National Flood Insurance Program (NFIP) in order to meet the requirements of the federal Endangered Species Act within Puget Sound. Local governments must limit the types of development allowed in floodplains in order to remain eligible for continuing federal flood insurance coverage and to receive other federal benefits. For example, under some circumstances no development is permitted. In others, greater restrictions are placed on bulkheads and shoreline modifications.

Three basic options, each with its own guidelines and recommendations were issued by FEMA and continue to be updated. These options include: 1) adopting a model statute; 2) incorporating new requirements into existing environmental statutes such as the CAO and SMP, or 3) establishing compliance on a permit by permit basis, subject to the approval of the National Marine Fisheries Service. (Known as the reasonable and prudent alternative

FEMA recommends that communities with CAOs and SMPs update their regulations, and has issued a checklist of the bi-op requirements. This is the simplest option and the one adopted by most jurisdictions. It allows the greatest flexibility, and where existing regulations fail to address an element of FEMA compliance, the model ordinance section can be adopted

[http://www.fema.gov/pdf/about/regions/regionx/nfip\\_ea\\_biological\\_opinion\\_checklist\\_final.pdf](http://www.fema.gov/pdf/about/regions/regionx/nfip_ea_biological_opinion_checklist_final.pdf). A copy of the bi-op checklist should be added to our BAS.

Whatcom County participated in the development of an updated program to comply with the biological opinion (March 2011 NFIP conference). It appears that the county selected selected option 3 (Door 3), which is similar to a site specific EIS for habitat assessment for individual permits, which is the most cumbersome and expensive way (for the developer) to proceed. For example, it must address issues such as cumulative impacts generated from the site.

At least as of 2013, most of the permits submitted by the county involved subdivision and development not within a floodplain. A few mitigation projects were approved, but in my estimate, the thornier issue of floodplain structural development remained to be addressed.

The local jurisdiction with permitting authority must demonstrate to FEMA that any proposed development in the FEMA designated floodway, the CMZ plus 50 feet (as identified according to Ecology 2003), and the riparian buffer zone (RBZ, as described by the Department of Natural Resources 2007 stream typing system and WDFW's 1997 stream buffer guidelines) does not adversely affect **water quality, water quantity, flood volumes, flood velocities, spawning substrate, and/or floodplain refugia for listed salmonids.**

None of these updated standards have been incorporated into the CAO. In fact, the county lacks an updated review and analysis of fish and wildlife species, conducted by a field biologist or fisheries expert, and refused to develop such information for the 2016 comp. plan update process. Therefore, the county lacks a quantifiable baseline standard necessary to establish compliance with no net loss, and thus, a basis for establishing permit specific compliance.

I request that the CACAC be provided with a staff briefing regarding the background and current status of this matter. The problems with permit specific compliance vs. CAO amendment vs. model code adoption should be explored and solutions identified. This would be appropriate during review of the critical area for floodplains.

One obvious solution is to engage in landscape based watershed characterization and analysis of ecosystem functions, with emphasis on salmon and wildlife. Another option is to simply adopt the updated checklist guidelines into the CAO and SMP. Finally, it is important to coordinate any solutions with the local tribes, as they hold fishing rights in many of the impacted areas, and a mutually agreeable solution will benefit all parties. This also needs to be coordinated with the SMP and changes being made at a public hearing in two weeks.

The Whatcom County Natural Hazard Mitigation Plan, from August 2011, should also be incorporated into BAS and our review of the CAO.



Please enter this as part of the public record for our advisory committee so that it will be subject to public review.

Sincerely,

Wendy Harris

## References

The biological opinion is available at [www.fema.gov/media-library/assets/documents/30021](http://www.fema.gov/media-library/assets/documents/30021)

A good resource page with links to all aspects of this issue is found at <http://www.fema.gov/national-flood-insurance-program-endangered-species-act>

## Federal and State Regulations

“Endangered Species Act – Section 7 Consultation, Final Biological Opinion,” National Marine Fisheries Service, September 22, 2008

*Model Ordinance for Floodplain Management Under the National Flood Insurance Program and the Endangered Species Act*, FEMA 2011.

*NFIP Floodplain Management Requirements A Study Guide & Desk Reference for Local Officials*, FEMA 480, 2005, [www.fema.gov/library/viewRecord.do?id=1443](http://www.fema.gov/library/viewRecord.do?id=1443)

*Mitigation guidance and JARPA Permit information*, Army Corps of Engineers, Seattle District.  
<http://www.nws.usace.army.mil/PublicMenu/Menu.cfm?sitename=REG&pagename=Forms>

*CRS Credit for Habitat Protection*, FEMA, 2010, <http://training.fema.gov/EMIWeb/CRS/>

## Maps and Databases

Critical habitat maps:

– NMFS: <http://www.nmfs.noaa.gov/pr/species/criticalhabitat.htm>

– US Fish and Wildlife Service: <http://criticalhabitat.fws.gov/>

*Forest Water Typing System*: Washington Department of Natural Resources  
[www.dnr.wa.gov/BusinessPermits/Topics/ForestPracticesApplications/Pages/fp\\_watertyping.aspx](http://www.dnr.wa.gov/BusinessPermits/Topics/ForestPracticesApplications/Pages/fp_watertyping.aspx)

*A Framework for Delineating Channel Migration Zones*. Washington State Department of Ecology and Washington State

Habitat Assessment *Forest Water Typing System*: Washington Department of Natural Resources  
[www.dnr.wa.gov/BusinessPermits/Topics/ForestPracticesApplications/Pages/fp\\_watertyping.aspx](http://www.dnr.wa.gov/BusinessPermits/Topics/ForestPracticesApplications/Pages/fp_watertyping.aspx)

*A Framework for Delineating Channel Migration Zones*. Washington State Department of Ecology and Washington State Department of Transportation, Ecology Publication # 03-06-027, 2003. <http://www.ecy.wa.gov/biblio/0306027.html>

*National Wetland Inventory* maps for the Puget Sound Region, U.S. Fish and Wildlife Service, <http://www.fws.gov/wetlands/>

*Priority Habitats and Species (PHS) Database*, Washington Department of Fish and Wildlife, <http://wdfw.wa.gov/hab/phslist.htm>

*Washington Natural Heritage Database*, Washington Department of Natural Resources, [http://www.dnr.wa.gov/ResearchScience/Topics/NaturalHeritage/Pages/amp\\_nh.aspx](http://www.dnr.wa.gov/ResearchScience/Topics/NaturalHeritage/Pages/amp_nh.aspx)

Washington State Soil Survey data, see the USDA Natural Resource Conservation Service maps or online *Web Soil Survey*, <http://websoilsurvey.nrcs.usda.gov/app/>

**Article 2, Admin.**

**16.16.250 Submittal requirements and critical areas review process.**

D. The technical administrator may waive the requirement for critical areas review under this chapter when he/she determines that all of the following conditions are met:

1. There are no jurisdictional critical areas on site nor within ----- feet.

2 4. The proposed development activity is located on a parcel that received a previous critical areas review and appropriate county permits were issued;

3 ~~2~~. All critical areas on the parcel have been identified and delineated and the effects of the proposed development activity have been thoroughly considered in accordance with the regulations in effect at the time;

4 ~~3~~. The activity is in compliance with all permit conditions including mitigating measures, as applicable, that were imposed as part of the prior review and there are no outstanding violations of conditions that were imposed as part of the previous review;

5 4. The prior permit has not expired;

6 ~~5~~. The development activity involves a use that is equally or less intensive than the development activity that was subject to the prior permit. Land use intensity shall be based on factors including development density, critical areas impacts, impervious surface, noise, glare, dust, hours of operation, and traffic.

**16.16.255 Critical areas assessment reports.**

B. The assessment report shall:

1. Demonstrate that the submitted proposal, if applicable, is consistent with the purposes and specific standards of this chapter;

*[reason: an owner should have the option to submit a report on a lot and get acceptance of the designation and description of any critical areas without submitting a development proposal.]*

2. Describe all relevant aspects of the development proposal, if applicable, 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. Identify proposed mitigation and protective measures as required by this chapter.

C. The technical administrator shall review the critical areas assessment report for completeness and accuracy and shall consider the recommendations and conclusions of the critical areas assessment report to assist in making administrative decisions concerning approval, conditional approval, or denial of the subject project and to resolve issues concerning critical areas jurisdiction and appropriate mitigation and protective measures.

D. Critical areas assessment reports shall generally be valid for a period of five years from the date of written notice than the report was accepted as complete and accurate by Natural Resources staff. Future land use applications may require preparation of new or supplemental critical area assessment reports, unless it can be demonstrated to the satisfaction of the technical administrator that the previously prepared report is adequate for current analysis. The technical administrator may also require the preparation of a new critical area assessment report or a supplemental report when new information is found demonstrating that the initial assessment is in error. If the technical administrator requires more information in the report, he/she shall make the request in writing to the applicant stating what additional information is needed and why.

H. At a minimum, a critical areas assessment report for a proposed project shall include the following information:

1. A site plan showing the proposed development footprint and clearing limits, all relevant critical areas and buffers within and abutting the site, a written description of the project, an examination of project on-site design alternatives, and an explanation of why the proposed activity requires a location on, or access across, a critical area and why alternatives are not feasible;

2. A written description of the critical areas and buffers on or abutting the site, including their size, type, classification or rating, condition, disturbance history, and functions and values. Projects in frequently flooded areas must comply with the reporting requirements of WCC Title 17. Projects on or adjacent to geologically hazardous areas shall identify the type of hazard and assess the associated risks posed by the development or that the development may be subject to;

3. An analysis of potential adverse critical area impacts associated with the proposed activity including, but not limited to, effects related to clearing, grading, noise, light/glare, drilling, damming, draining, creating impervious surface, managing storm water, releasing hazardous materials, and other alterations;

4. An analysis of how adverse impacts to critical area ~~impacts or risks~~ will be avoided and/or minimized, and/or an analysis of the proposed measures to prevent or minimize hazards. When impacts cannot be avoided, the report shall include a plan describing mitigation that will be provided to replace critical area functions and values altered as a result of the proposal. The mitigation plan shall be consistent with the provisions of WCC 16.16.260 and the other applicable articles of this chapter;

5. The dates, names, and qualifications of the persons preparing the report and documentation of analysis methods including any fieldwork performed on the site; and

6. Additional reasonable information requested by the technical administrator for the assessment of critical areas impacts or otherwise required by the subsequent articles of this chapter. (Ord. 2005-068 § 1).

[end of .255]

**Definitions:** The term “adverse impact” is used in many places in the CAO, and the TAC is proposing more usage.

However, the CAO does not define this term. The County Shoreline Program (SMP), 2008 version does, in a way that sets a reasonable “significant” threshold that has been used in state WACs and local administration of the State Environmental Policy Act (SEPA) and other regulations since the 1980s.

I recommend we adopt the SMP’s definition with two changes, for better consistency with other state and local rules, and to focus it on critical areas:

from the Co. SMP

#### **Chapter 23.110--DEFINITIONS**

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.~~

**From:** WENDY <w.harris2007@comcast.net>  
**Sent:** Wednesday, April 15, 2015 12:59 AM  
**To:** Cliff Strong  
**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."  
**Attachments:** draft -CAO Art 2-Sect 255-reports-by ra-4 1 '15.docx

## 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

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**From:** "Roger Almskaar" <[almskaarr@comcast.net](mailto:almskaarr@comcast.net)>  
**To:** "Amy de Vera" <[adp@deainc.com](mailto:adp@deainc.com)>, "Amy Dearborn-WC PDS" <[adearbor@whatcomcounty.us](mailto:adearbor@whatcomcounty.us)>, "Audrey Borders" <[msqlty@gmail.com](mailto:msqlty@gmail.com)>, [cstrong@co.whatcom.wa.us](mailto:cstrong@co.whatcom.wa.us), "Dannon Traxler" <[dtraxler@langabeertraxler.com](mailto:dtraxler@langabeertraxler.com)>, "Dave Onkels" <[david@onkels.com](mailto:david@onkels.com)>, "David Haggith" <[dhaggithn3@frontier.com](mailto:dhaggithn3@frontier.com)>, "George Boggs" <[GBoggs@whatcomcd.org](mailto:GBoggs@whatcomcd.org)>, "Kate Blystone" <[kateb@re-sources.org](mailto:kateb@re-sources.org)>, "Laura Sachs" <[laurabsachs@gmail.com](mailto:laurabsachs@gmail.com)>, "Mark Personius" <[MPersoni@co.whatcom.wa.us](mailto:MPersoni@co.whatcom.wa.us)>, "Max & Carole Perry" <[maxandcarole@gmail.com](mailto:maxandcarole@gmail.com)>, "Roger Almskaar" <[almskaarr@comcast.net](mailto:almskaarr@comcast.net)>, "Virginia Watson" <[vwilkenswatson@aol.com](mailto:vwilkenswatson@aol.com)>, "Wayne Fitch" <[wfitch@co.whatcom.wa.us](mailto:wfitch@co.whatcom.wa.us)>, "Wendy" <[w.harris2007@comcast.net](mailto:w.harris2007@comcast.net)>, "Wes Kentch" <[wwkentch@comcast.net](mailto: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

## Clearing Up Misconceptions

### Compliance with WAC Is Mandatory for Critical Areas

It has been asserted numerous times that a “WAC” regarding critical areas is voluntary guidance and creates no mandated directives. This is incorrect, and I am providing the legal authority that establishes the regulatory nature of the WAC. I hope this will assist CAC members and put to rest continuing conflicts over a resolved issue.

“RCW” stands for Revised Code of Washington. An RCW is a law passed by the State Legislature and signed by the Governor. “WAC” stands for Washington Administrative Code. State agencies adopt WACs pursuant to statutory authority granted by the state legislature. That is exactly what happened with critical areas. The state legislature authorized the Department of Commerce to write rules that implement the state statutes for critical areas.

RCW 36.70A.170(2) provides that in making critical area designations, counties and cities **shall** consider the guidelines established by the Department of Commerce (DOC) pursuant to RCW 36.70A.050(1). Under RCW 36.70A.050, these are the “**minimum guidelines**” that apply to all jurisdictions. The DOC minimum guidelines are codified in WAC Chapter 365-190. While the county is free to adopt standards that are more stringent than the WAC, in no circumstance may it adopt standards that are less protective.

<http://app.leg.wa.gov/WAC/default.aspx?cite=365-190>.

The WACs require the county to classify and designate critical areas, noting that “fish and wildlife habitat conservation areas contribute to the state's biodiversity and occur on both publicly and privately owned lands. Designating these areas is an important part of land use planning for appropriate development densities, urban growth area boundaries, open space corridors, and incentive-based land conservation and stewardship programs.” WAC 365-190-130(1). This is also intended to protect critical areas and “preclude land uses and developments which are incompatible with natural resource lands and critical areas.” WAC 365-190-120(3).

WAC 365-190-130(2) and (4) specifies the animals, habitat, plants, waters and land that must be considered for classification and designation and imposes an obligation to use Best Available Science.

It is true that certain subsection provisions of the critical area WACs are worded as suggestions, but these are easily distinguishable from the majority of WAC provisions which are mandatory. For example, WAC 365-190-130(3)(a) mandates certain concerns that must be considered in classifying and designating critical areas, and in subsection (b), certain concerns that may be considered (i.e., to do so is recommended, but not mandated.) Except for those



limited situations where discretionary language is used, WAC Chapter 365-190 should be treated as regulatory.

## **The County Must Protect Riparian Vegetation And Trees**

CAC members have questioned the value and necessity for protecting trees in and near streams, arguing that they do little to reduce water temperature and protect fish. This is contrary to both BAS and WAC provisions.

First, the WAC indicates that these trees should be given consideration for designation as locally important habitat, noting that the Washington Department Of Natural Resources' natural heritage program can provide a list of high quality ecological communities and systems and rare plants. WAC 365-190-130(4)(b). And, in fact, the most recent DNR list contained a number of trees on its high quality or rare plant community and wetland ecosystems list for Whatcom County that the county has failed to review and consider.

<http://www1.dnr.wa.gov/nhp/refdesk/lists/communitiesxco/whatcom.html>

**Washington Natural Heritage Information System  
Known High-Quality or Rare Plant Communities and Wetland  
Ecosystems of Washington  
September 2014  
Whatcom County**

Alnus rubra / Rubus spectabilis Forest	Red Alder / Salmonberry	
Alnus rubra Cover Type	Red Alder Forest	H
Alnus viridis ssp. sinuata Shrubland [Placeholder]	Sitka Alder	
Betula papyrifera var. commutata - Alnus rubra / Polystichum munitum Forest [Provisional]		Paper Birch - Red Alder / Swordfern
Lysichiton americanus Herbaceous Vegetation		Skunkcabbage
Populus balsamifera ssp. trichocarpa - Alnus rubra / Rubus spectabilis Forest		Black Cottonwood - Red Alder / Salmonberry

The Best Available Science on riparian vegetation is soundly established. WDFW determined that riparian habitat performs many functions that are essential to survival of fish and terrestrial species, and issued Management Recommendations for Washington's Priority Habitats: Riparian.

<http://wdfw.wa.gov/publications/pub.php?id=00029>. See also Land Use Planning for Salmon, Steelhead and Trout: A land use planner's guide to salmonid habitat protection and recovery; <http://wdfw.wa.gov/publications/00033/>.

BAS establishes important values for vegetation in riparian areas. It shades streams maintaining cool temperatures needed by most fish. Plant roots stabilize stream banks and control erosion and sedimentation, and vegetation creates overhanging cover for fish. Riparian habitat contributes leaves, twigs, and insects to streams, thereby providing basic food and nutrients that support fish and aquatic wildlife. Large trees that fall into streams create pools, riffles, backwater, small dams, and off-channel habitat that are necessary to fish for cover, spawning, rearing, and protection from predators. Pools help maintain riffles where gravel essential for spawning accumulates. Riparian vegetation, litter layers, and soils filter incoming sediments and pollutants thereby assisting in the maintenance of high water quality needed for healthy fish populations. Riparian habitat moderates stream volumes by reducing peak flows during flooding periods and by storing and slowly releasing water into streams during low flows.

Approximately 85% of Washington's terrestrial vertebrate species use riparian habitat for essential life activities and the density of wildlife in riparian areas is comparatively high. Forested riparian habitat has an abundance of snags that are critical to cavity-nesting birds and mammals and to many insectivorous birds. Downed logs are common and provide cover and resting habitat for amphibians, reptiles, and small mammals. Intact riparian habitat has well-developed vegetation, usually with multiple canopy layers. Each layer consists of unique habitat niches that together support a diversity of bird and mammal species. The relatively mild microclimate of riparian areas offers relief from hot, dry summers and cold, snowy winters which is especially important to deer, elk, and moose. Riparian habitat forms natural corridors that are important travel routes between foraging areas, breeding areas, and seasonal ranges, and provides protected dispersal routes for young. Protected access to water is also an essential attribute of intact riparian habitat.

### **Best Available Science Is Real And Identifiable**

Repeatedly, members of the CAC have questioned, and frankly, mocked the concept of Best Available Science. The parameters for what constitutes BAS are set out in WAC Chapter 365-195.

<http://apps.leg.wa.gov/wac/default.aspx?cite=365-195>

Scientific information can be produced only through a valid scientific process. To ensure that the best available science is being included, WAC 365-195-905 requires the county to consider the characteristics of a valid scientific process. In the context of critical areas protection, a valid scientific process is one that produces reliable information useful in understanding the consequences of a local government's regulatory decisions and in developing critical areas policies and development regulations that will be effective in protecting the functions and values of critical areas.

The characteristics generally to be expected in a valid scientific process are as follows:

1. **Peer review.** The information has been critically reviewed by other persons who are qualified scientific experts in that scientific discipline. The criticism of the peer reviewers has been addressed by the proponents of the information. Publication in a refereed scientific journal usually indicates that the information has been appropriately peer-reviewed.

2. **Methods.** The methods that were used to obtain the information are clearly stated and able to be replicated. The methods are standardized in the pertinent scientific discipline or, if not, the methods have been appropriately peer-reviewed to assure their reliability and validity.

3. **Logical conclusions and reasonable inferences.** The conclusions presented are based on reasonable assumptions supported by other studies and consistent with the general theory underlying the assumptions. The conclusions are logically and reasonably derived from the assumptions and supported by the data presented. Any gaps in information and inconsistencies with other pertinent scientific information are adequately explained.

4. **Quantitative analysis.** The data have been analyzed using appropriate statistical or quantitative methods.

5. **Context.** The information is placed in proper context. The assumptions, analytical techniques, data, and conclusions are appropriately framed with respect to the prevailing body of pertinent scientific knowledge.

6. **References.** The assumptions, analytical techniques, and conclusions are well referenced with citations to relevant, credible literature and other pertinent existing information.

In short, the results of BAS can be duplicated in different studies and reflect a consensus among members of the scientific community. It has been alleged that BAS is meaningless because it is always changing. This is not exactly correct. BAS is constantly being refined, updated and enhanced, but the basic principles do not change over time... we simply learn more. However, the easiest way to ensure that the county is adopting BAS is to simply rely upon those documents and studies that have been placed on the BAS list by the Department of Commerce and other state agencies.

Submitted by Wendy Harris,  
CAO CAC member  
July, 2015

## Jessi Roberts

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**From:** WENDY <w.harris2007@comcast.net>  
**Sent:** Wednesday, July 15, 2015 3:11 AM  
**To:** Cliff Strong  
**Cc:** Borders, Audrey; Haggith, David; Blystone, Kate; Sachs, Laura; Mark Personius; Almskaar, Roger; Watson, Virginia; Kentch, Wes; Rubash, Bert; McShane, Dan; Ingram, Joel; Kuhlman, Kara; Grah, Oliver; Sim, Pete; Ericson, Ryan; Meyer, Susan; Steffensen, Wendy; Amy Dearborn; Wendy Harris  
**Subject:** Critical Areas CAC Memo  
**Attachments:** Clearing up misconceptions.doc

There have been a few issues of unresolved conflict among the CAC members, and I have prepared an analysis of GMA provisions that I hope will put these rather basic matters to rest.

Wendy Harris

## Jessi Roberts

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**From:** WENDY <w.harris2007@comcast.net>  
**Sent:** Thursday, August 27, 2015 1:11 PM  
**To:** Cliff Strong  
**Cc:** Borders, Audrey; Haggith, David; Blystone, Kate; Sachs, Laura; Mark Personius; Almskaar, Roger; Watson, Virginia; Kentch, Wes; Rubash, Bert; McShane, Dan; Ingram, Joel; Kuhlman, Kara; Grah, Oliver; Sim, Pete; Meyer, Susan; Steffensen, Wendy; Ryan Ericson  
**Subject:** CPAL provisions

I would like to visit the CPAL provisions. Given the amount of nitrate contamination we have in the county for ground wells, the problems with the CAFO permit expiration, and lack of meaningful review by the county, I do not think the existing rules for manure management are adequate. I understand how politically charged this is, but we also have a responsibility to the public to ensure safety. I am also concerned about the farm plan secrecy. This is the only public health and safety provision that the public is not allowed to review and I think it is highly inappropriate. The law allows for a waiver by the farmer of the PRA exemption, and I think this should be a plan participation requirement, particularly as the farm plans are not protecting our waters. I see no benefit to maximizing participation in a program that is not working, nor do I see any proprietary information that is contained in the farm plans that needs to be protected. All that the farm plans reflect is the type of BMP that are being imposed, which are listed by number straight from a rule book.

I also think that farm plans need to be considered in close connection with the CARAs.

And I have to admit that I have a pit in my stomach as I send this because I know how much backlash this will generate. There is something wrong when it requires an act of courage to address important public health and safety issues. We can help move beyond an environment of fear and blame and anger by ensuring a safe environment for a fact based discussion of AG issues.

Wendy Harris

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**From:** "Cliff Strong" <[CStrong@co.whatcom.wa.us](mailto:CStrong@co.whatcom.wa.us)>  
**To:** "Audrey Borders" <[msqlty@gmail.com](mailto:msqlty@gmail.com)>, "David Haggith" <[dhaggithn3@frontier.com](mailto:dhaggithn3@frontier.com)>, "Kate Blystone" <[kateb@re-sources.org](mailto:kateb@re-sources.org)>, "Laura Sachs" <[laurabsachs@gmail.com](mailto:laurabsachs@gmail.com)>, "Mark Personius" <[MPersoni@co.whatcom.wa.us](mailto:MPersoni@co.whatcom.wa.us)>, "Roger Almskaar" <[almskaarr@comcast.net](mailto:almskaarr@comcast.net)>, "Virginia Watson" <[vwilkenswatson@aol.com](mailto:vwilkenswatson@aol.com)>, "Wendy" <[w.harris2007@comcast.net](mailto:w.harris2007@comcast.net)>, "Wes Kentch" <[wwkentch@comcast.net](mailto:wwkentch@comcast.net)>  
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**Sent:** Thursday, August 27, 2015 11:38:13 AM

**Subject:** Critical Areas CAC meeting scheduled for 9/2 Cancelled

Hey Team, I still don't have enough material to warrant a meeting next week so I think we'll cancel and try for the 16<sup>th</sup>.

If any of you have something you'd like on that agenda, please feel free to let me know.

Thanks,

**Cliff Strong**

Senior Planner

Whatcom County Planning & Development Services

[cstrong@co.whatcom.wa.us](mailto:cstrong@co.whatcom.wa.us)

360.778.5942 ←**Note new phone number**

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