(No alterations have been made to the contents of this document since it was submitted on 03-14-2007.)

Comments and questions on Article I of Brooks' draft code on wetlands dated 03-05-07

Dr. Brooks' responses are ~~highlighted in blue~~ in Arial 12 point. 03-13-07

Amy Hiatt's second round of comments and questions are in Enviro 14 point 03-14-07

I have added Roman numerals (I, II, III…) to identify the separate articles in the 03-05-07 draft. The following comments are keyed to the first article (I), plus the sections and sub-sections as numbered in the draft.

In my opinion, the review of a draft code needs to encompass three broad, and somewhat inter-related, categories:

1. Format/outline/organization
2. Language/style/definition
3. Regulatory content

As the third category is the most important at this stage of the drafting process, I will refrain from making comments related to the first two categories except where they seem relevant to content.

Article I: [Overlay Zones] Critical Area Identification and Standards

I-A-1: As noted during the meeting on 03-08-07, deep water habitats that are designated as critical areas are covered under the Fish and Wildlife Habitat Conservation Area section of the CAO, and should not be dealt with in the section on Wetlands.

It was decided to exclude deep-water habitats from this section of the code during the 03/08 meeting. It has been deleted from all other buffer paragraphs as well.

I-A-2: It is not clear what action triggers this determination to be made, who by, on the basis of what information (whether through maps/aerials/LiDAR only, or through site investigation by County staff), or what kinds of new development are subject to the determination. All types of development, other than those specifically exempted, are subject to this code.

The purpose of a code is not to relieve staff of the necessity of thinking – nor should it be the goal of code to define a prescriptive way of addressing a question. In most jurisdictions, staff refers to their local wetland inventories. If there is any question, they may conduct a site visit. Ultimately, it is the property owner's responsibility to identify wetlands on their property and to comply with the ordinance.

Tracy's Fundamental/Foundational Principle #2:
"Regulations adopted by Jefferson County should be clear, concise, and written in "plain English" so that the citizens of the County can know what is expected of them. The use of jargon, unexplained references to other portions of the code or other external documents not readily available to the public should be avoided. Where possible, as in the case of the Critical Areas Ordinance, regulations should exist as "stand alone" documents that contain

all of the information that a citizen would need to understand how to comply with the regulation."

I-A-3: As noted during the meeting on 03-08-07, "allowed uses" would be a better term than "permitted uses."

Changed to "Allowed uses"

I-A-3-a: What is the definition of "existing and ongoing agriculture"?

This term will be defined when the Committee considers the agriculture section. It would be arrogant and inappropriate to make such a definition prior to that work by the committee.

The sub-committee working on the agriculture section has already proposed a definition. I was looking for confirmation that you are using the same definition.

I-A-3-b: What is the definition of "recognized professional"? Must that individual be actually doing the work, or is it sufficient to require that the work be supervised by said individual?

Qualifications are provided in paragraph E of the Special reports section. It is not appropriate for government to dictate to a professional how he/she supervises his/her employees. For my part, I do all of the work myself. As in all work of this kind, the professional who signs the report is responsible for all aspects of the work. Whether or not he/she feels that an employee is qualified to perform certain tasks is up to the professional. That is basic to any endeavor in any organization and it is not appropriate to include prescriptive management language in a code.

I agree with what you say. However, I think that the phrase "under the supervision of a qualified professional" would be better than "accomplished by recognized professionals."

I-A-3-c: Are there to be no limitations on who does this work, or the materials and methods used?

The US EPA is responsible for imposing restrictions (limitations) on pesticide labels. Any person using those pesticides must use them in accordance with the label. Any person using pesticides outside the label in a way that causes harm to wetlands, surface waters, or other protected environments can be prosecuted. It would be inappropriate to impose additional restrictions in this code.

So, only "recognized professionals" are allowed to "accomplish" site investigations, but anyone is allowed to control noxious and/or invasive weeds by any means (chemical or mechanical) not otherwise regulated?

I-A-3-d: Trees can be hazardous to more than just structures, e.g. roads, trails, legally established landscaping, people occupying any area that does not have access expressly prohibited.

Agreed. Bill Wheeler noted this problem as well and the wording was changed to, "d) Removal or pruning of hazard trees when those trees pose a risk to human health or property."

I-A-3-e: If deep water habitats are not included with wetlands, is this clause necessary? Are there not other emergency situations besides fire fighting? What about flood control or diversion; or emergency landing of an aircraft; or anything else we can't anticipate?

In an emergency people do what is necessary to deal with the problem. Deepwater habitats are those with water depths ≥ 6 feet. Some wetlands are sufficiently inundated to provide water for fire-fighting. However, some pervertedly righteous environmentalists might argue that dewatering a wetland to fight a fire was un-necessary because water could have been obtained from another source further from the scene of the fire. This makes that use allowable.

You evidently missed my second point, which is that there are other types of emergencies aside from fires. It is not reasonable to expect that all types of emergencies can be anticipated, so this clause should be worded in such a way that it is left to the judgement of the landowner and/or emergency responders to determine what constitutes an emergency, and what is the appropriate action to take at that time.

I-A-4: As noted during the meeting on 03-08-07, "conditional uses" refers to a particular process under the terms of the zoning code. The same phrase should not be used in the context of this clause. Also, does this set of clauses apply to alterations resulting from the uses and activities allowed by section I-A-3, or does it only apply to any other alterations that might occur without being subject to a permit, or that might be proposed in association with a required permit?

IA3 describes allowed uses – not conditional uses and this is clear. I used the term "conditional uses" to indicate that the uses are not allowed outright, but are subject to obtaining a conditional use permit.

Again, you missed the point. Are you really sure you want to recommend that any activities, uses, or alterations not allowed outright in I-A-3, should be subject to the UDC conditional use permit process (JCC 18.40.520 through 18..40.630)?

I-A-4-a: What is the meaning of this clause?

This paragraph means that a conditional use must still comply with other applicable sections of the code. In other words, if you get a conditional use permit to hay a Class IV wetland that has not previously been in continuous agricultural use, you still can't fill or drain the wetland.

See comment above.

I-A-4-b: The Administrator's approval is required "at a minimum." What is required at a maximum? Is approval contingent on all of subsections (i) through (iv) being satisfied, or just some of the subsections?

"At a minimum" means that for all regulated critical areas, an administrative approval is required for an alteration. If no other jurisdiction has regulatory authority over the wetland, then he county's approval is all that is needed. However, if the wetland is not isolated, then the USACE must approve an alteration. If the wetland has a threatened and/or endangered species present, then the USFWS, WDFW and/or DNR may also need to be consulted.

The use of the word "and" at the end of each subsection (i through v) means that all of these conditions must be made. This is standard usage in codes.

So, even if, for instance, an HPA is granted for work that otherwise does not require a County permit, the landowner must still make a separate application to the County for "at a minimum" an Administrative Approval?

I-A-4-b-i: This seems quite burdensome. Would it not be more fair to require only that the alteration be neutral to the public benefit or loss? How does one go about a precise measurement of the public benefit or loss? It seems difficult enough to establish gain or loss of wetland function and value. Why introduce an additional standard, especially without explicit guidelines for its application?

Class I wetlands are special and rare. They deserve special protections and should not be altered except for exceptional purposes. Class II wetlands are also special and deserve extra (but not necessarily special) consideration. It was my opinion that these special and rare wetlands should not be disturbed in the absence of exceptional circumstances. Having said that, if the committee agrees, I would not object to removing b(i).

I-A-4-b-iv: What are all the conditions for modification? Who establishes these conditions?

Every situation will require different *conditions* applied to the authorization. Your question cannot be answered without specifying the specific wetland and the specific hazards posed by the requested alteration. Once again, the purpose of a code is not to relieve permit writers and administrators of the need to think. Given that it does not appear that Jefferson County has highly qualified wetland biologists available, the administrator might require (as a condition of his approval) that the applicant have a management plan prepared by a qualified biologist to define the *conditions* for approval on a site specific basis.

Then perhaps it would be better to change this clause to: "All site-specific conditions, as determined by a qualified wetland biologist, for modifying a Class I or II wetland can be met; and"

I-A-4-c: What is "otherwise provided in JCC-XXX"?

This would include the allowed uses in section A3. However, as the full code takes shape, the code writer may include other sections here.

(No alterations have been made to the contents of this document since it was submitted on 03-14-2007.)

I-A-4-c-iii: What are the "Land Use Standards JCC-XXX"?

The specific sections of the code will be inserted by the code writer. At this point, this statement is simply a recognition that the requirements of the wetland section do not stand alone but are interconnected with other Land Use Standards – such as zoning.

I-A-4-c-v: As noted during the meeting on 03-08-07, clarification is needed on how the commitment to restoration is made irrevocable; who determines, by what process, and at whose expense, whether or not the alteration has in fact failed to "preserve, improve or protect watershed functions and values"; how the clause is enforced, who pays for the restoration if the original "applicant" or the current owner are unable to. Who is responsible for establishing the baseline documentation of the functions and values of an entire watershed? Is this done in a publicly sponsored and funded process? Is a separate, privately funded, watershed analysis required every time any applicant seeks approval for an alteration to a wetland unit within the watershed? What happens if it is later demonstrated that functions and values are being degraded across an entire watershed? Does everyone who has made an alteration subject to section I-A-4 then have to reverse that alteration? Is every landowner who has made an alteration responsible for degradation that occurs anywhere within the watershed?

The emphasis on protecting watershed functions and values as opposed to individual wetland functions and values comes from decisions of the Western Washington Growth Management Hearings Board. The Board has emphasized watershed functions and values. It is not necessary to analyze an entire watershed to understand how an individual wetland may be affecting the watershed's functions and values. Experience (if you decide to become qualified to do this work) will make that clear to you.

Experience has taught me not to accept being brushed off by such statements. The real issue is that you appear to be holding individual landowners accountable for consequences that are not defined, and that they may or may not have any control over. Thank you for providing some of the missing information in (a) through (e) below. I assume that these sections will be edited and added to the next revision of your draft code.

The bottom line is that a performance standard based approach to wetland protection, which forms the basis of the Committee's recommendations, requires that property owners be responsible for their actions. Under any circumstances, if you cause harm to the environment, you can be held responsible.

It is unclear to me how your formula for buffer determination is any more performance-based, and any less prescriptive, than the DOE method. Is it not correct that if no alterations are made within the wetland or the buffer, the applicant is not subject to clause I-A-4-c-v? Or are you now saying that all landowners are to be held individually liable by the CAO for failure to "preserve, improve or protect watershed functions and values" even if they have developed their property in accordance with your formula for determination of prescriptive buffers and without alteration to their particular wetland or buffer?

The Department of Ecology has acknowledged that prescriptive buffer widths have not worked and that the goal should be site specific management plans for protecting critical areas. Ecology's problem, and that of NRCS, is that they don't know how to accomplish this stated goal. Operating standards (prescriptive standards is not the correct term) are easy to define and implement. However, they are necessarily overly onerous because they seldom work.

I've not encountered any indication of DOE having concluded that prescriptive buffers have not worked, except in relation to agricultural activities already occurring in wetlands and buffers. Prescriptive standards are designed to err on the side of protection, and it is undeniable that such standards are onerous to some people in some instances. That is why we have buffer averaging, buffer reduction, compensatory mitigation, variances and reasonable use provisions. However, to me, as a landowner and as an architect making site development decisions on behalf of my clients, erring on the side of protection is a far more preferable position than pushing the limits with little or no buffers, being held to performance standards that are measured far beyond the borders of my property, and having no certainty that the government will not come back to me in a few years to require that I undo something that was previously approved.

The performance standard based approach embraced by the Committee is more difficult and expensive to implement. That is why the Committee's recommendation allows property owners to develop site-specific habitat management plans. However, that flexibility comes with a price and the price is accepting responsibility for the plans ability to protect the wetland and watershed under consideration from the development being proposed.

The performance-standard approach that you outline has the potential to cost the citizens in at least five ways: the permit fees and general taxation to fund additional County staff to establish, implement, monitor, and enforce the standards; the direct cost to the landowner for professional services in preparation of site-specific management plans; the cost to the landowner and/or the public for legal defense if a damage claim is made, the cost of restoration if damage is proven, the cost of compensating for the ecosystem services lost if restoration is not undertaken or is not completely successful; and possibly also the cost of repair or replacement of affected buildings and infrastructure. It appears that the public and the owners of agricultural land are willing to embrace this approach in recognition of the importance of local agriculture. I do not think the same policy is necessary or desirable for other land-uses. Apparently you don't either or you would not have developed your formula for determination of prescriptive buffers.

If there are Jefferson County citizens who do not want to accept the responsibility of being good stewards, then perhaps they should be given the option of using WDOE prescribed buffers and not having to comply with paragraph d(v). That is an option that will explore in

this Thursday's meeting. Having said that, several of your concerns are either not applicable or they have minimum potential of occurring.

a). As defined in the proposal, if the alteration creates an exceedance of WAC 173-201 or 173-204 then the owner has failed in his/her responsibility to manage the alteration. As in all cases, the government is responsible for demonstrating that harm is being created by the alteration. The property owner is responsible for correcting the situation. The fact that an alteration has been made and that the owner or subsequent owners are responsible for the performance of that alteration should be made a notice to the title. However, please note that an alteration authorized by local government does not insulate a current or future property owner from being prosecution for causing an exceedance of WAC 173-204 or WAC 173-201.

WAC 173-201A and WAC 173-204 establish standards for surface water quality and sedimentation. Are you including any standards for groundwater quality, hydrology, or habitat? I live in a watershed that does not have surface water flow in six years out of ten. How is the government going to track the effects of an alteration I make, and distinguish those effects from alterations made by my neighbors?

b) Jefferson County has baseline data for several of the county's watersheds. The monitoring program included in this proposal is a bookmark because developing an efficient monitoring program is not a trivial pursuit and will take time. An efficient monitoring program will integrate all existing local, state and federal data and ongoing monitoring efforts. It will likely expand the Conservation District's ongoing programs, which have established baseline data for a number of parameters in many watersheds. Since this regulation will only apply to non-forested areas, the Forest Practice Act will continue to regulate wetlands, lotic and lenetic systems in forested areas.

This regulation is supposed to apply to forest conversions, and all forest practices on lands platted after 1960 and/or in Urban Growth Areas.

c) We don't have private Highway Patrols or a private EPA. Protection of the public good is a public responsibility and you have emphasized that it is necessary to protect surface waters and wetlands for the public's benefit. Therefore, it is incontrovertible that until there is a showing of harm, monitoring watersheds in Jefferson County is a public responsibility.
d) If functions and values are being degraded across an entire watershed, then the county will have responsibility to determine the causes and develop a plan to correct the problem. That is done in many places at numerous times. The necessary corrective actions will determine who is responsible for correcting the problem(s).
e) Are all drivers on US 101 fined because one driver is speeding?

I-A-4-e: Is this referring to the entire mitigation sequence, or just compensatory mitigation? I don't agree that the type and extent of compensatory mitigation done should

be limited to exact replacement of the functions and values lost from the wetland being altered. This is not likely to serve the purpose of maintaining, much less improving, conditions at the watershed scale.

Obviously this only refers to compensatory mitigation. There is no rigorous scientific basis for the mitigation ratios prescribed by WDOE and you have provided no evidence (nor has Ecology) that the mitigation ratios are appropriate.

Although I have not studied the material, I am aware that DOE has done considerable research on the effectiveness of compensatory mitigation, and that their findings are the basis for the new ratios they have established..

In many cases, the watershed's functions and values can be maintained or improved with no increase in the area of wetlands or wetland buffers. The approach taken in this proposal is to use the WDOE (2004) functional scores as performance standards against which to judge the effectiveness of the mitigation. The WWGMHB has clearly stated that the Growth Management Act does not require improvement of wetland and/or watershed functions and values. The GMA only requires maintenance of existing functions and values. Improvement is something that requires landowner cooperation and development of a high stewardship ethic. We are in the Western Region. We are not in the Central Region and the decisions of the Western Regional Board are what matter most to Jefferson County.

I-A-5: A wetland delineation should not be an absolute requirement for every parcel containing, or within the vicinity of, a wetland. There are many circumstances in which the proposed use or activity could be located far enough away from a wetland that a delineation is unnecessary. There are also many circumstances in which a partial delineation would be sufficient.

Agreed. I've added the words, "When required by the administrator" to the beginning of this text.

Wetland delineators should at a minimum have up to date certification by USACE, and training in the DOE rating system. The Delineation Manual is more than just a guide. It has to be followed, per RCW 36.70A.175 and RCW 90.58.380.

Strongly disagree. You are obviously not familiar with the Delineation Manual. The manual requires significant judgment on the part of the delineator and that judgment is not achieved by attending a week-long quick course. It is gained only through several years of actual work in the field. Nearly every county requires some level of experience and the submission of several reports in order to qualify. You and Jill have stated in one our early meetings that you are considering opening a consulting business to offer these services. If you pursue that goal, you need to go through the same hoops that all other recognized delineators go through. There is no shortcut to the development of the necessary judgment. When you get some experience actually delineating and rating wetlands, this will be obvious to you.

You have more experience with career changes than I do, so I'll certainly consider your advice if for some reason I ever need to take up a new profession. In the meantime, here's the text of the first of the RCWs cited above: "Wetlands regulated under development

regulations adopted pursuant to this chapter shall be delineated in accordance with the manual adopted by the department pursuant to RCW 90.58.380."

I-A-6: As with a delineation, it is important to clarify the circumstances under which a wetland rating is required.

Agreed. The words, "When required," have been added to the beginning of this text.

I-A-6-a: Category I wetlands may be irreplaceable regardless of time.

Nonsense. All of the wetlands on the Olympic Peninsula were created after the glaciers last melted. Some wetlands, such as bogs and mature or old-growth forested wetlands do take a long time to develop. The language used here is the language typically found in codes and federal guidelines.

I-A-6-b: It is entirely possible for the score for habitat function of a Category II wetland to be less than 20 points. In order for a wetland to be rated Category II, it has to have either a total score of between 51 and 69 points and/or special characteristics for estuarine, coastal lagoon or interdunal wetlands as described in the rating system manual.

In response to this comment, the wording was changed to "These wetlands typically have habitat scores >20 points." While it is possible for a Class II wetland to have habitat scores <20 points, it is very uncommon. When you have actually rated a multitude of wetlands this will become obvious to you.

I-A-6-c: It is inaccurate to say that in order to be rated Category III a wetland has to have a score for habitat function of less than 20 points. In order for a wetland to be rated Category III, it has to have either a total score of between 30 and 50 points and/or be an interdunal wetland with special characteristics as described in the rating system manual.

As above, I've added "typically" to this statement.

I-A-6-d: Category IV wetlands have a total score for all functions of 29 points or less. Again, it is irrelevant, if not misleading, to indicate that a score for habitat function is "typically" less than 15 points.

We can disagree on this. The statement is not misleading. Perhaps we can revisit your opinion in this regard after you have a few years of experience.

I-A-6-e: The recent Hearings Board decision disallowing Kitsap County's exemption of wetlands of this size must be taken into consideration before allowing the same exemption to go forward in Jefferson County.

The Kitsap decision is under appeal. These exemptions have been in Jefferson County's code for years and there is no evidence that they have resulted in a loss of watershed functions and values. What does the Western Washington HB say about this? Before increasing the burden on property owners, DOE and/or you must demonstrate that the less restrictive exemption has resulted in some harm. Show us the documented harm from the

existing exemptions before demanding that they be increased. In other words there is a shared onus here.

Please state the source of your information about an appeal of the Kitsap decision. There are several Petitions for Review pending vs Kitsap County, dating from February 18-20, but the update of Kitsap County's CAO has been adopted as of February 26, and the exemption for small wetlands has been removed.

There is no evidence of loss of watershed functions and values in Jefferson County because there has been no measurement of same.

I-A-6-g: The ratings manual only allows multiple ratings of a single wetland unit under certain clearly defined and narrowly prescribed circumstances. If the Jefferson County CAO is to provide for multiple ratings beyond what the ratings manual allows, this must be explicitly stated, the criteria thoroughly described, and "complex wetlands" defined. It should be noted that buffer averaging in accordance with the DOE guidelines provides ample opportunity for establishing a wider buffer around the higher value areas of a wetland unit in exchange for a narrower buffer around other parts of the unit.

The statement in the proposed code is as explicit as it can be. Your addiction to prescriptive codes is again evident. There are many wetland biologists working on the Olympic Peninsula that are very capable of determining when it is best to give multiple ratings to a complex wetland system. Jefferson County will have to rely on these experienced biologists for guidance. Every other jurisdiction does that and there is no reason for Jefferson County to not also rely on **experienced wetland biologists** to make recommendations of this kind. Inexperienced delineators may need checklists to guide them, but Jefferson County and the citizens of Jefferson County do not want to use inexperienced delineators.

I'm probably more addicted to precision than I am to prescriptions…

I-A-7: What are "regulated activities"? So far we have "permitted uses", "conditional uses", "alteration approvals." Definitions are needed, and editing for consistency.

A "regulated activity" is any activity that is regulated by the code – period. Permitted uses are not regulated. Non-permitted uses in regulated wetlands are regulated activities.

I-A-7-b: How does one distinguish between an intentional alteration and an unintentional alteration? How does one determine a "wetland's watershed functions and values" as opposed to the functions and values established for a wetland unit by the wetland rating form?

An intentional alteration is any alteration created by human activity. An inadvertent alteration might be associated with a flood event or upstream activity that results in a significant change to the buffers on downstream property. The list could go on and on. Again, there is no substitute for judgment gained through two or more years of actual field experience under supervision of an experienced professional.

I'll refer you again to Tracy's Fundamental/Foundational Principle #2..

I-A-7-c-i: The values established in the rating system are numerical scores having absolutely nothing to do with distance. The scoring system arbitrarily gives a higher point score to a wetland with higher function and value, but could just as easily have followed the reverse order in accordance with the roman numerals for the categories. Moreover, the numerical values do not *describe* the wetland's values. Even the particular sections of the ratings form that generated the numerical values give only a cursory indication of the wetland's valuable characteristics.

WDOE (2004) is becoming the accepted standard for rating wetlands in Washington State. When you start leaving the numerical system – you start relying on perceptions and underlying philosophies. The WDOE (2004) system is the best we have and while it is not perfect, it is certainly better than someone's perceptions. You mention that the scores **could have been reversed.** Fact is, they weren't. The numeric scores were designed to provide the buffers widths described in the *Supplemental Best Available Science*. The values take into consideration the likely affects that specific hazards will have on each wetland function. I don't have time to provide you with the insight that comes from 30 years of environmental modeling. But the values in both tables are designed to key specific hazards to specific functions taking into account the overall value of the wetland. You will likely disagree.

What do you mean by "The numeric scores were designed to provide the buffers widths described..."? You did not design the rating system. You are adapting it to a new and entirely different purpose. I will defer to what the authors of the system have to say about this.

I-A-7-c-ii: The tables are incorrectly numbered.

Thank-you, the references to the Tables have been renumbered 2 and 3.

I-A-7-c-v: There is no scientific or mathematical basis for multiplying a numerical score that represents the relative value of a wetland function by one factor that represents the relative sensitivity of the wetland function to disturbance, and another factor that represents the relative risk of an adjacent land-use causing adverse impact, and labeling the result as a dimension in feet or any other unit of measurement.

Amy, I can provide you with many papers describing mathematical models I have developed for U.S. and Canadian governments and for Industry. Your comments above are simple nonsense. The numbers that come out of all of the tables are dimensionless and the model uses an additional multiplier of *1.0 feet* to obtain the linear dimension.

Nevertheless, your math was wrong until you threw in the "additional multiplier of 1.0 feet to obtain the linear dimension." That taken care of, there still remains the requirement to justify, from a scientific standpoint, converting a numerical rating score to a linear dimension with a unit of one foot.

Assuming that the mathematical problem with the formula is corrected, why is only the largest of the three results used to determine the final buffer dimension, rather than the sum of the three results? The rating category of a wetland is determined by the total of the scores for all three types of functions (water quality, hydrology, and wildlife habitat). Why isn't the size of the buffer also determined on the basis of the total score for the wetland?

There is no problem with the formula. The reason that only the largest of the three widths is used is because protection for the other two functions are provided **within** the largest buffer.

The proposed formula appears to be designed to support smaller buffers than those established by the DOE guidelines, without addressing the fact that at this time there is no locally derived, empirically tested, and peer reviewed science to either support or contradict the BAS referenced and synthesized by DOE.

The *Supplemental Best Available Science* provides the basis for the buffers recommended in the Committee's recommendation. Nearly all of the papers cited in the *Supplemental BAS* have been peer reviewed and are published. Did you actually review the *Supplemental BAS*? If you would like to refute the conclusions reached in the peer reviewed literature reviewed in that effort, I would be pleased to respond to your criticism of those authors' works or to my interpretation of their work.

We've already done that, and you've already responded.

Table 1: A table, with footnotes to provide additional information, is a very effective way to communicate the allowed uses and activities in wetlands and in other critical areas. However, if a table is used, that should be the only place in the CAO where the allowed uses and activities are listed. Otherwise there is redundancy and potential inconsistency in the wording, as occurs in this draft between Table 1 and sections I-A-3 and I-A-4.

Table A3 was designed as an overview. I do not see any inconsistencies with Table A2. If a majority of committee members feel that this is an issue, we could simply move Table 1 into section A-3.

Missing from the list is routine maintenance of existing drainage ditches. Does that activity therefore require "alteration approval"?

This activity is covered either in the agriculture section or under the maintenance of existing landscaping and/or roads.

Table 2: Use of the word "hazard" in this context is confusing, especially because the sections of the CAO covering Geologically Hazardous Areas and Frequently Flooded Areas address landscape elements that are literally hazardous to public health and safety. More appropriate words might be "impact", "intensity", or "risk of degradation."

The term "Hazard" is used throughout the risk assessment literature for these purposes and it is appropriate in this context.

It seems reasonable that different land-uses and activities would have varying effects on the three functions of wetlands. However, no justification has been provided for the factors assigned to each of the listed land-uses or activities. Thus it is difficult to understand, for

instance, why a road leading to 5 residences has the same level of impact on all three wetland functions as a road leading to 100 residences, or why high intensity agriculture involving soil disturbance has twice the impact on wetland hydrology as urban housing.

The second instance is easy. High Intensity agriculture involving soil disturbance imposes a significant risk of wind and water erosion resulting in sedimentation of wetlands. What similar degree of repeated soil disturbance or source of TSS do you foresee in association with urban housing? If you can identify a similar source of TSS, I'll be pleased to increase the hazard multiplier for urban housing to the same value used for intensive agriculture that requires significant soil disturbance.

Runoff from construction sites is a significant source of total suspended solids, and even with best management practices, construction storm water is difficult to control. Soil disturbance in urban settings continues long after initial construction with ongoing landscaping activities. Other sources of TSS are the sanding of paved streets, regrading of unpaved streets, and cleaning of ditches. The relatively high percentage of impervious surface increases the amount of surface water that flows directly into the wetland rather than being absorbed in the upland soils.

In response to your statement that the hazard multipliers are the same for low intensity and moderate intensity roads, please note that the multipliers for low intensity roads are 0.5, 1.5 and 1.5. The multipliers for moderate intensity roads are 1.0, 2.0 and 1.5. Two of the three multipliers are different for the two hazards.

Yes, but you define moderate intensity roads as serving 5 homes to 100 homes. That's a big range.

A great deal of work was put into developing the BAS and writing this proposal. Rather than being a cut and paste effort attempting to put all of the restrictions found in numerous other CAOs into Jefferson County's CAO, I have attempted to create a CAO for Jefferson County that is specific to our citizens and our landscapes. The degree of effort is significantly different between cut and paste and de novo synthesis.

The fact remains that the only "new" element you are introducing to the CAO is your method of determination of prescriptive buffers.

My available time simply does not allow me justify each of these multipliers in the way you demand. Perhaps you would like to develop a set of multipliers with justification for each entry and present those to the committee. I, for one, would welcome constructive inputs such as that.

Note that justifications are necessary per Tracy's Fundamental/Foundational Principle #3:

"Regulations adopted by Jefferson County should be based upon clear statements of the rationale/reason for the regulation (i.e. a clear legislative statement of legitimate public purpose to be addressed by the regulation), the expected effectiveness of the regulation to address the identified legitimate public purpose, the means to be utilized to ascertain and assure that the regulation has its intended effect (i.e. for monitoring and evaluation), and for more timely modifying or rescinding the regulation if it fails to achieve the intended result (i.e. adaptive management and a "sunset clause.")

DOE and CTED have set a very high standard for satisfying this principle with numerous publications that are readily accessible and clearly understandable to scientist and non-scientist alike. Island County has set a different, but equally high, standard in its approach to satisfying the state mandate for protection of wetlands. If Jefferson County is to adopt its own unique combination of prescriptive buffers and watershed-based performance standards, its citizens deserve a comparable level of documentation and justification.

Definitions are needed for the various land-uses and activities. Does the intensity of animal husbandry refer only to the land used for pasture, or does it include confinement areas? Does low intensity agriculture involving less than biennial soil disturbance include agricultural buildings and related impervious surfaces? Is every retail store a low impact commercial development?

Once again you are showing your prescriptive stripes. Your need for precise definitions for everything is one of the basic reasons that your proposal has not been embraced by the committee. There is no need for the level of detail that you feel is appropriate. We are all reasonably intelligent people and Jefferson County's citizens have demanded that they not be treated as children with a rule and definition regulating every aspect of their lives. I suspect we will continue to disagree in this respect.

*Y'know, the problem with poorly organized, imprecise, vague, and undefined regulations is that they make people really angry. I assume I fit the description of a reasonably intelligent person who would rather not be treated as a child, and I'm hereby stating for the record that I volunteered to be on the Advisory Group because I want a Critical Areas Ordinance that I can apply **without** having to go to the Administrator for an interpretation on every clause, or an approval for every action. I want to be able to follow a clear and finite path of compliance and documentation. I want to be able to determine **with certainty** at the beginning of my design process what the relevant general, and site specific, requirements are for critical areas protection on my site; and I want to be able to read and judge for myself the reasonableness and applicability of these requirements to my particular needs and responsibilities. I want then to be able to proceed with confidence that if I do my job thoroughly and correctly, either in accordance with the prescriptive requirements of the code, or in accordance with protective measures designed specifically for the site in*

collaboration with the appropriate specialist, I will receive a permit in a timely and predictable manner. And I want a code that gives me alternatives to hiring said specialists to drain my pockets under the premise that I am completely incapable of understanding the regulations, or the science behind them, or the conditions on my own property, or my client's property, or of doing any thinking for myself. I also want a code that requires accountability on the part of those specialists. For example, if you are the person who has justified, on the basis of your scientific credentials, the placement of fill within 10 feet of a wetland that regularly floods far beyond the delineated edge, delivering sediment and other pollutants into the adjacent stream, then perhaps you ought to be the person who pays to remove the fill, replace whatever has been built on top of it, and decontaminate the wetland. Architects bear that kind of liability; maybe it's time wetland scientists did too.

Table 3: Is the third column (Habitat Function) optional? If so, and the applicant chooses not to volunteer his/her land for wildlife habitat, is the buffer requirement for habitat function determined just from the Table 2 multiplier?

Yes. It is my firm belief that Jefferson County's citizens will embrace a well-organized and sincere land stewardship program that emphasizes protecting natural resources and personal property rights. Furthermore, it is my believe based on experience, that the highly prescriptive and onerous approach that you propose will lead to resentment and a citizenry that will move from compliance to defiance with respect to wildlife. I realize you do not agree, but I believe your approach will be a disaster for Jefferson County's natural resources.

If hydrology is the defining characteristic of any wetland, why are the multipliers in the first column (Hydrology Functions) not all the same? Why does an estuarine wetland need a buffer twice as wide as any other wetland to protect its hydrologic function? The DOE guidelines state that buffers are not effective at protecting hydrologic function, except to prevent filling of the wetland with sediment. Why is hydrology even a factor in either Table 2 or Table 3?

Estuarine wetlands and coastal lagoons are typically located in Beaches soils consisting of unconsolidated sand. These environments are highly subject to wind erosion and they need wider buffers with healthy vegetation to prevent wind erosion.

If the WDOE BAS says that buffers don't protect wetland hydrologic functions – then WDOE's BAS is wrong. Much of the literature reviewed in the *Supplemental BAS* deals with the efficacy of vegetative filter strips to keep TSS from entering surface waters and wetlands. There are other factors affecting wetland hydrology. However, draining of wetlands is an overt act that is not prevented by buffers of any width.

In Volume 2 Appendix 8-A page 6, DOE says:

"Generally speaking, the factors that control the hydrologic functions in a wetland are not significantly altered by changes in the buffer. The amount of water coming into a wetland, its velocity, and its timing are controlled by processes that occur at the larger scale of the watershed or the contributing basin of that wetland.

There is one case, however, in which buffers may help protect hydrologic functions. Buffers may protect the storage capacity of depressional wetlands by trapping sediments that might otherwise fill the wetland. In the absence of buffers that trap sediment, a wetland can slowly fill with sediment, reducing the amount of water it can store. In this case, the requirements for a buffer would be similar to those for the water quality functions described above."

I-A-8: Who determines what the functions and values of the watershed are? What is the definition of "adverse affect"? The word "setback" normally refers to buildings or other structures. What is its meaning here?

The functions and values of a watershed are the sums of the functions and values of each part of the watershed. In addition, watersheds may provide additional value to marine and/or lenetic environments, like delivery of sediments necessary to sustain long-shore environments, providing low salinity refuges for some marine animals, providing low gradient transitional environments for euryhaline organisms, etc. etc.

My questions. remain unanswered.

I-A-9: What is 18.xx.xxx?

This will include section IA4. I don't know what the code's numerical structure will be until the entire document is finished by the code writer.

I-A-9-a: The DOE guidelines provide for buffer averaging or buffer reduction depending on the characteristics of the site. This clause needs to be more specific. It implies that both options are available but does not indicate how, or under what conditions.

The proposal assumes that the administrator can think. 9a) refers only to buffer averaging. I'm not sure what you are referring to with the term "both" as applied to 9a).

Buffer averaging is not the same as buffer reduction so perhaps the section heading should be "Buffer Modification."

I-A-9-b: The functional characteristics identified in the ratings form may be too general to provide an adequate measure of whether or not a proposed alteration or buffer reduction will cause no net loss of function or value.

And that is why we need to only allow experienced wetland biologists to develop these plans with recommendations to the administrator.

I-A-10: What about protection of the trees in a forested wetland against wind throw, or the plants and animals dependent on the microclimate in a bog, if the required minimum buffer is so narrow that there would be only one or two ranks of upland trees remaining?

This ordinance does not cover forested areas. They are covered by the FPA. Typical buffers for a bog, which would likely be Class I or II would be 100 to 120' or more. Why is that two ranks of upland trees? You need to be far more specific in these kinds of speculative questions.

If you are converting the forested upland adjacent to your forested wetland to a use other than commercial forest production, it is no longer regulated under the Forest Practices Act. What happens then?

It is possible for a bog to have relatively low scores for hydrologic and water quality functions, especially if it is located in an area where there is no existing development and the "opportunity" multipliers in the rating form are both "one". This means that your formula could generate a buffer of only 50 to 60 feet for this wetland type which is always ranked a Category I on the basis of its Special Characteristics.

I-A-10-b: Other reasons to increase the buffer width on steep slopes is because the vegetative cover is less effective at visual screening. and the velocity of surface water runoff is greater which reduces the opportunity for dispersion and infiltration within the buffer.

On steep slopes, the buffer width along the vegetated contour increases as 1/cos. Therefore, a longer vegetated buffer is associated with a steep slope because the buffer is measured in a horizontal plane. Second, in rural Jefferson County, with zoning of one home per 20 acres (typical in my area), people are not going to build on steep slopes. Very frequently, the effective buffer boundary is at the top of a steep slope.

Too bad we're not just dealing with building on flat 20 acre parcels. We could be clearing for a view on a one-acre lot in a subdivision. And I agree with the last sentence, which contains a likely example of a non-anthropogenic functionally isolated buffer situation. See I-A-12 below.

I-A-11-b: It would be far more sensible and effective to refer to the County's requirements, and recommended BMPs, for management of Construction Storm Water. Plastic construction fencing does absolutely nothing to filter or contain the flow of sediment.

In the intended context, the silt fences and/or plastic construction fences are intended as a mark for the buffer boundary. I agree that erosion control should refer to other appropriate sections of the code. However, there is no need to refer to those in the wetland section. DCD will impose those requirements as separate conditions on permits.

I-A-12: Is it not possible that a naturally occurring object, such as a cliff or rock outcropping, could also functionally isolate a portion of a required buffer?

It is possible, but the instances are so low in Eastern Jefferson County that this situation is best covered through a recommendation by the experienced wetland biologist completing the delineation, rating and/or management plan. The code should not try to cover every possible situation.

But why limit it unnecessarily to "anthropogenic" features?

I-A-14-b: A conservation easement should not be the only option for permanent protection of separate tracts containing critical areas and buffers. Other options are: ownership in common by owners of other (buildable) lots in a subdivision; public ownership; ownership by a Land Trust or other non-profit.

This paragraph is intended to prevent the creation of unbuildable lots that are subsequently sold and a new owner applies for a reasonable use permit. This paragraph does not prevent the developer from exercising other options.

Article II: Special Reports

Article III: Wetland Delineation Report

Article IV: Wetland Mitigation and Habitat Management Plans

Article V: Stewardship Incentives

Article VI: Watershed Monitoring

Article VII: Residential Best Management Practices

Thank-you for your comments. They initiated several changes. Some were not incorporated because our approach to protecting natural resources is so very different. Please excuse any typos in my response. It's 2300 hours and I'm simply too tired to edit.

Kenn Brooks