

**ISLAND COUNTY PLANNING COMMISSION  
SUMMARY MINUTES  
OAK HARBOR HIGH SCHOOL  
PARKER HALL  
TUESDAY, AUGUST 8, 2006**

**MEMBERS PRESENT:** Ray Gabelein Alan Schell  
Val Hillers Bill Massey  
Wayne Havens Mike Joselyn  
Sheilah Crider

**MEMBERS ABSENT:** Scott Yonkman Deb Eidsness

***NEW BUSINESS – Public Meeting***

Jeff Tate, Assistant Planning Director, provided an overview of the wetland update process and introduced Dr. Paul Adamus.

*Presentation of the Phase I Wetlands Report by Dr. Paul Adamus*

Dr. Adamus explained that the purpose of the study is to base any new wetland regulations on Best Available Science (BSA).

The report will address how well the existing Critical Area Ordinance (CAO) protected wetland health (quality) and number (quantity), how Island County wetlands compare with other wetlands in Western Washington and what if anything needs to be changed.

Phase I consists of data compilation and analysis, Phase II will deal with the BAS review and Phase III will be the drafting of the revised wetlands ordinance.

Dr. Adamus noted that Phase 1 involved field visits to 103 statistically valid sample wetlands over a 6 month period in 2005. Island County has 958 known wetlands. Data was collected on plants in the wetlands and their buffers and the different types of alterations or disturbances to the wetlands. The Washington Department of Ecology's Western Washington Wetlands Rating System was used to estimate wetland functions and assign wetland categories I (highest function/value) thru IV (lowest function/value).

Various existing maps (geology, soils, vegetation, slope, topography) were overlaid with the wetlands maps and analyzed using a GIS system. They looked at not only each individual wetland and its buffer but also the contributing areas (the geographic area from which surface water drains to the particular wetland) and watersheds.

He pointed out that any time you use GIS and digital data you have to trust the data. They did not have the luxury of going out and groundtruthing all the GIS data. For that reason they did not put a lot of emphasis on the digital data and mostly emphasized the field data but they did feel a responsibility to make the best use of whatever data was out there even though it might have some limitations and have tried throughout the appendices of the report to acknowledge the limitations of those existing digital data layers.

In addition, information from the County's permit files were compiled and reviewed and aerial photographs covering multiple time periods were interpreted to assess disturbances and changes to the wetlands.

One of the ways that scientist can tell if a wetland is healthy is by looking at the chemistry, physics and biology of the wetland. Consensus does not exist in scientific literature on what constitutes a healthy wetland and no codified regulations currently exist. Water samples were not taken due to the expense and time constraints and the fact that the County has a new Surface Water Quality Monitoring Program. That program will be sampling some wetlands in the County as well as streams and other surface waters. Similarly measuring the chemistry of sediments in the wetlands is very expensive and could not be done within the scope of this project.

A healthy wetland is one that has a water level fluctuation and duration of flooding that is within the range of natural variation that is typical of the County's watershed. In order to measure water you have to be in a wetland for a long time you can't just visit a wetland for one day and be able to say how long it floods. It was simply not possible to measure the hydrology of these wetlands during one field season. The same holds true for animals. Staff visited just one wetland a day which doesn't tell you a whole lot about the animals that live in the wetland. Ultimately what they chose to focus on was plants. The composition of the plant community can tell you a lot about the hydrology of the wetland.

The County is not making any claims that the report is a comprehensive biological survey, it is not, however it is more comprehensive than anything undertaken by a county here in Washington State and he considers it cutting edge science.

In looking at the plants they determined species composition and in particular they looked at non-native plants. Non-native plants are a concern because they spread and can displace many of the native species. The other aspect is when you get these monocultures of non-native species coming in it can negatively affect the wildlife that live there. Wildlife can adapt to one particular set of plants and if those plants change on them some wildlife species can get used to it but a lot of species simply can't. It has been speculated that with the loss of native species the wetlands become less able to filter pollution, sustain wildlife, and store water.

About 87% of Island County's wetlands host some non-native species of plants. The good news is that non-native plants dominate only 20% of the wetlands in Island County. More non-native plants were found in wetlands that showed physical signs of alteration.

Table 37 of the report provides a summary of the health of Island County wetlands and Table 38 provides a summary of the alterations and/or potential stressor in Island County wetlands based on indicators used in the study. The table provides the indicator, how it was measured in the field, whether it was measured in the wetland , it's buffer, the surrounding area, the contributing area or some combination of those, the percentage of wetlands in Island County that were excellent, good, fair and poor for that particular indicator and an overall grade.

As he mentioned earlier no legal standards exist for what is excellent, good, fair or poor. He used his professional judgment, a review of the data from the County and a review of scientific studies published elsewhere to come up with some criteria. For example, using non-native emergent plants as an indicator, a poor wetland is one that has more than 50 % cover of non-native emergent plants. The results found that only 6% of the wetlands have more than 50% non-native emergent plants.

One of the indicators used to determine alterations and/or potential stressors in Island County wetlands was impervious surfaces between a wetland and the upland edge. The overall grade for this indicator as well as buildings in wetlands was excellent. Corridors (the vegetation that connect two or more wetlands, where wildlife from one wetland can move to the next) and patch size (how much natural vegetation is around the wetland) rated good. For the buffer width and disturbance they looked at the area around the wetland out to about 150 feet using both aerial photos and on the ground inspections and found their overall condition to be excellent. The tree and shrub canopy, within 100 feet of the wetland buffer, was graded as fair.

To determine the potential stress of timber harvest countywide they used data collected from site visits, aerial imagery, and a data base obtained from the Department of Natural Resources. Based on those three sources the overall grade for timber harvest in the wetland was good and in the wetland buffer it was graded as fair.

They also looked at the permit files from 1984 through 2005. Anytime a property owner wants to do some alterations to a wetland they have to go to the County and apply for a permit. A majority of the time applications are granted with certain conditions pertaining to restoration of the wetland.

In summary, the Phase 1 Study accomplished the following:

1. Estimated that 80% of the County's wetlands are healthy.
2. Showed that wetland losses due to County permits are small, and are offset by natural recovery of wetlands altered prior to 1984.
3. Established a quantitative baseline for future CAO updates.
4. Showed how the County's wetlands differ from those elsewhere.
5. Estimated the proportion of wetlands that would have wider or narrower buffers if the WDOE Rating System were adopted.

Current Island County Regulations (since 1984)

Category	Criteria	Zone	Smallest wetland regulated	Required buffer width	Approx. % of County land area (wetlands & buffer)
A	Estuarine (tidal)	Any	Any	100 ft	1%
A	Native vegetation dominates, OR protected species habitat or presence	Rural Others	1/8 acre 1/4 acre	100 ft 100 ft	7% 5%
B	Non-native vegetation dominates	Rural Others	1/4 acre 1 acre	50 ft 25 ft	1% 1%
C	Man-made			None required	?

What the Washington State Department of Ecology recommends:

**Buffer Alternative 1**

Buffer width = 300 ft (Categories I and II); for about 39% of Island County wetlands (57% by area)

Buffer width = 150 ft (Category III); for about 48% of Island County wetlands (41% by area)

Buffer width = 50 ft (Category IV); for about 12% of Island County wetlands (3% by area)

**Buffer Alternative 2**

The WDOE Category (based on total score)	Park Rural Forest Review District	Rural AG Rural Village Rural Service Airport	Municipality Light Manufacturing Commercial AG Rural Residential Rural Center
I and II	150 ft (9% of IC wetlands)	225 ft (28% of IC wetlands)	300 ft (<1% of IC wetlands)
III	75 ft (6% of IC wetlands)	110 ft (42% of IC wetlands)	150 ft (3% of IC wetlands)
IV	25 ft	40 ft	50 ft

	(<1% of IC wetlands)	(14% of IC wetlands)	(<1% of IC wetlands)
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Alternative 2 is based on the level of impact.

The majority of the wetlands in Island County are Category III and are in the Rural and Rural Residential zones. If the County chooses to adopt Ecology’s Alternative 1 most of the County’s wetlands would be required to have a 150 foot buffer.

**What other County’s are doing?**

County	Wetland Buffers	#of Wetland Regulatory Categories	Using WDOE Categories Now	Minimum Regulated wetland size (sq. ft.)
Island	25-100 ft	3	No	5438 (1/8 acre)
Jefferson	35-200 ft	4	Yes	
King	50-300 ft	4	Yes	No minimum
Kitsap	30-250 ft	4	Yes	2500
Mason	25-100 ft	3	Yes (modified)	
Pierce	25-150 ft	4	Yes	2500
Skagit	25-150 ft	4	Yes	1000
Snohomish	40-225 ft	4	Yes	No minimum
Thurston	50-300 ft	4	Yes	
Whatcom	25-300 ft	3	Yes	4400
WDOE	25-300 ft	4		No minimum

A majority of the counties are using DOE’s categories and there is considerable expectation that Island County will adopt DOE’s categories. Currently he is reviewing the field data and the same literature that the DOE used to come up with their buffer recommendations as well as new studies that have been published to determine whether Island County has any reason to go with even larger buffers than DOE’s recommendations or possibly smaller or keep what they currently have in place.

DOE’s recommendations are not requirements because they recognize that different counties have different circumstances.

**What’s different about Island County wetlands:**

- None along rivers. Few along lakes
- 78% of the inland wetlands lack streams
- 80% drain to pocket estuaries important for salmon
- 52% don’t look like wetlands
- Many are on slopes or are surrounded by slopes
- 24% are on top of highly susceptible aquifers

- >19% are dominated by trees or shrubs.

Progress on Phase II:

### **Literature Review & Critique**

WDOE “Best Available Science” document (Sheldon et al. 2005)

WDOE Wetland Rating Method (Hruby 2004)

WDOE buffer recommendations (Granger et al. 2005)

Matrix of wetland buffer requirements adopted by other jurisdictions.

### **Wetland Categories**

Are the County’s wetland categories (from 1984) “Best Available Science”?

Are WDOE’s wetland categories “Best Available Science”?

Are there better ways to define wetland regulatory categories?

### **Buffer Width Requirements**

Are the County’s requirements (from 1984) BAS?

Are WDOE’s recommendations BAS?

What do more recent studies show?

How would widths differ if only Island County species are considered?

What if only T & E and wetland obligate species are considered?

Should buffer widths be based on wetland importance? (level of Functions)

### ***PUBLIC COMMENT***

Elliott Menashe, Clinton, said it is pretty well known that there is an inadequate wetland inventory here in Island County. He asked if staff was able to address that during their sampling?

Paul Adamus said it would have been nice if they could have, but given their limited budget and time that was not an objective of the study. He acknowledges the problem which is also true of almost all of the other counties in Washington who are also proceeding with their critical area updates even though they know their wetland maps are not totally accurate.

Elliott Menashe said the maps strongly under-represent forested wetlands and as far as he knows none of the seep wetlands in Island County are mapped or even discussed in the ordinance.

Jeff Tate noted that the report shows mapped wetlands and through that process they updated the wetland map to include everything that’s available in paper record over the last 20 years which has all been digitized into the mapping system. Clearly because the original maps were based primarily off of aerial photographs there are features such as forested wetlands and seeps that were not picked up. As far as the ordinance goes Mr.

Menashe is correct the CAO does not reference seeps, but that is an issue that comes up later on as recommendations are made on where to go and how to modify the ordinance.

Elliott Menashe said he was talking right now just about this study and what it is based on. He asked if any effort was made to rate the data sources and how that deals with the statistical analysis.

Paul Adamus explained that the statistical analysis was based just on what had been mapped. If an objective of this study had been to estimate the percent error in the existing wetland maps that would have meant throwing down a whole bunch of other statistical points throughout the County in areas that were not presently mapped as wetlands and to get the landowners permission to visit them to see if they did have seeps or other wetlands. The number of such random or statistical points that would be required would be enormous. It would be in the 1000's and although one could use some spatially explicit models to estimate areas where wetlands could occur in the County it just wasn't possible within the realm of the study. He agreed that they did not have a perfect sample of Island County wetlands but to get a perfect sample would cost 5 to 10 times more than the current study.

Jeff Tate added that everyone acknowledges that the information is incomplete but it isn't bad information. The Washington Administrative Code obligates the County to use BAS. The County understands that there are some deficiencies but there is no way that it is going to become perfect data.

Elliott Menashe said he was not asking for perfect data he was asking for an idea on how good this report can be based on inadequate information, inadequate mapping, assumptions that can't be quantified and sample sets that you can't take.

Jeff Tate reiterated that they go through a requirement that the administrative code for Washington State outlines for Best Available Science. It outlines what data sources qualify as BAS. You do the best you can with the information that you have.

Elliott Menashe asked if the study was using wetland and wetland buffers and the association between the two interchangeably.

Paul Adamus noted that there were separate statistics in the report for wetlands and wetland buffers.

Elliott Menashe asked if the study considered the indirect cumulative impacts on wetland losses as well as the direct physical loss of the wetlands.

Paul Adamus said it would be quite challenging, in the span of a single field season, to get at the interactions among wetlands that will hopefully be something that comes out of the Surface Water Quality Monitoring Program. They did to some extent address it

because the field data forms have questions that pertain to things like the corridors between wetlands and the permeability of the landscape between wetlands.

Elliott Menashe asked if they used any of the LiDAR technology. From what he has seen when you apply LiDAR to the topographic and wetland maps a lot of the wetlands are actually incorrectly located. He has clients who have been told they have a wetland based on the County maps when it is fairly obvious to anyone that you don't have a wetland on a west facing slope with Madrona trees growing on it. He did not believe that those updates have been made in the record in Island County and he was hoping that the LiDAR information will provide that lost piece and that the County would use that to reconcile bad data and actually improve it so that people are not unnecessarily misinformed because a map is wrong.

Paul Adamus reiterated that the purpose of the study was not to go out and re-delineate any of the mapped wetlands. They did notice on the LiDAR imagery and the air photos when they overlaid the wetland boundaries from the National Wetland Inventory and the County's existing wetland boundaries that there were instances of offset where things shifted left or right and the report provides the percentage of those cases where they found a shift occur but they did not try and go out and re-map everything.

John Luechauer, Oak Harbor, asked what individual or entity makes the final judgment as to which standards to adopt.

Jeff Tate noted that the Planning Commission will make a recommendation to the Board of County Commissioners who will make the final local decision.

Steve Erickson, WEAN, asked if they found any reasonably strong correlation between Island County's classification system and the Department of Ecology's functional assessment.

Paul Adamus said they did do a very rough crosswalk between the Department of Ecology and the County categories and there were some County Category A wetlands that turned out to be Category 3 DOE wetlands and vice versa.

Steve Erickson said with regard to your wetlands report card he was curious to see what that would look like as a curve graph. You would expect to have some kind of normal distribution.

Paul Adamus said he did not intentionally set up those categories to affect a normal distribution he drew them mostly based on ecological knowledge as best he could reflect it.

Steve Erickson said he believed that the report equated return of canopy cover with recovery from clearing.

Paul Adamus said that was one of the indicators. It is certainly not the only thing that can be used for that but it is the most obvious and easily identifiable.

Steve Erickson asked if that was for all woody species or just tree cover.

Paul Adamus said he did not recall off hand but the specific variable they used is provided in Appendix B.

Gary Fisher, Oak Harbor, said when he received the wetland mailer he thought all his questions would be answered, but he is still does not know what his wetlands are designated. He was part of the field visit study done by the County and has volunteered for the well and septic system studies and still doesn't know what his wetlands or the adjacent properties wetlands are designated.

Paul Adamus said if his property was part of their study then he should contact Jeff Tate for that information.

Rufus Rose asked how DOE came up with their recommendations. Did they do any field work and did they do any in Island County?

Paul Adamus noted that DOE looked at 122 wetlands in Western Washington, only one of those was in Island County. DOE's 122 wetlands, as opposed to Island County's 103, were not a statistical sample so the ability to make inference about wetland characteristics and so on faces some different challenges.

Ann Brett, Oak Harbor, noted that the report states that 24% or almost ¼ of the wetlands are on top of highly susceptible aquifers. How does that affect the water that is leaving the wetland?

Paul Adamus explained that if there is pollution coming into the wetland and it is a highly permeable situation where the water doesn't spend much time in the wetland then that polluted water is going to move right through without being treated and potentially could cause contamination problems in the aquifer. Unless it is severely polluted the retention time in wetlands for most pollutants is long enough to filter the polluted water and in essence protect the aquifer underneath.

Anne Brett asked how she would be able to find out if pollutants such as pesticides, herbicides or antifreeze flowing into a wetland that is perhaps recharging the aquifer are being correctly filtered.

Paul Adamus indicated that she would have to hire a hydrogeologist for that. It is not something that could be done in a rapid assessment mode it takes some pretty sophisticated engineering data.

Gary Piazzon, Coupeville, said if 19% of the wetlands that you delineated were dominated by trees and shrubs were you able to determine whether the remaining 80% were left to grass as a natural process or because of human activity.

Paul Adamus said they did not collect that kind of information, but most of the remaining 80% did have some shrub cover it just wasn't more than 50%.

A member of the Audience noted that he would like to see some mitigation tradeoffs put in this wetlands proposal.

Jeff Tate said that is something that the County has been looking at. It has been done in other counties and cities.

Donna Painter expressed concern about the qualifications of some of the Planning Department employees with regard to inspecting wetlands. Her second concern is Western toads. They are a threatened species on the federal list and a state species of concern. She hoped that Dr. Adamus could look at the species population that exists in the watershed off of Jones Rd before they are totally eradicated.

Jeff Tate noted that the County is obligated under the law to re-look at all the species. He took exception to her comment regarding staff noting that he believed that the Planning Department has staff that are qualified for evaluating wetlands.

Marianne Edain, WEAN, said mitigation banking may look very attractive to a whole lot of people, but all the literature supports the fact that mitigation banking is generally a miserable failure, basically you end up losing wetland A to development in favor of wetland B and in the end wetland B is never restored.

With regard to the statement that wetland losses due to County permits are small she personally can come up with nearly 100 wetlands that have been severely damaged or entirely destroyed. She feels that there is a lot more wetland destruction happening in Island County than is reflected in the wetland report and that the County needs to look at other sources of information to discover those.

Paul Adamus indicated that they used three main sources, aerial photographs, their own field inspections and the permit file record.

Marianne Edain, WEAN, suggested another source might have been the County's violation files.

Cleveland Hall noted that the wetland sites visited by the County were those in which the landowner gave their permission. What percentage of the wetlands did you not get permission from and therefore were left out of the study?

Paul Adamus noted that he contacted the first 300-400 on the list of randomly sequenced wetlands. The majority of those that were contacted gave them permission. They did a statistical analysis of the ones that were denied versus the ones that were visited. They did not have on site information for the ones they didn't visit, but they compared the GIS information that was available and the air photos to see if there was any overwhelming bias in our sample and found that for most characteristics there was not and that is written up in the appendix of the report.

A member of the audience said if only 24% of wetlands were on top of susceptible aquifers what about the rest do they drain into the aquifers.

Paul Adamus noted that the remainder are either on aquifers that are rated as moderate or low susceptibility.

Mark DeYoung said Island County has been regulated under the current wetland categories for the last 20 years or so and based upon the report it sounds like the condition of our wetlands is good to excellent so why would we want to change anything.

Paul Adamus said because the science is moving ahead and we have more information about not just actual threats to wetlands but potential threats to wetlands.

Elliott Menashe noted that he has been doing wetland surveys in Island County since 1987 and he can attest that the number given for wetlands and their buffers that have been disturbed is much more. If the rating of good to excellent is based on that number then that calls into question the validity and use and value of the conclusions that have been arrived at. If those conclusions are then used to make recommendations for change then your good to excellent isn't good to excellent and you are not going to get good recommendations based on bad information.

Paul Adamus agreed, but noted that the growth board says to use BAS and acknowledges that BAS is never going to perfect science. He indicated that if Mr. Menashe has a data set or better information he would certainly be open to using it.

Rufus Rose said apparently some people are pleased that Island County wetlands are good to excellent and other people won't be pleased until you say they are awful. Will there ever be a point at which we will have a definitive answer and the issue can be put to rest?

Paul Adamus noted that a definitive answer would have to come from the state or federal people or from a consensus of the scientific community published as a position paper. Lacking either of those it is always going to be an open question. We have a baseline now so even if we can't say what is good or bad in the future we will at least be able to say what is getting better or worse, we will have a trend.

Elliott Menashe indicated that he would be willing to share redacted information from his files with the County.

Public comment was closed.

The meeting adjourned at 8:00 p.m.

Respectfully submitted,

Pam Dill  
Administrative Assistant