

MINUTES  
**WETLANDS REVIEW BOARD**  
**REGULAR MEETING**  
July 18, 2013, 5:30 p.m. City Hall room 224

**Meeting Summary**

Board Members Present: Hal Geiger, Andrew Campbell, Brenda Wright, Lisa Hoferkamp, Nina Horne, Amy Sumner, Dan Miller, Jerry Medina

Board Members Absent: none

A quorum was present.

Staff Members Present: Teri Camery, Chrissy McNally CBJ Planners

Public Present: Dr. Paul Adamus, Adamus Resource Assessment

Meeting called to order at 5:30 p.m.

**II.** May 30, 2013 Regular Meeting minutes approved with minor edits

**III.** **Agenda was approved.**

**IV.** **Public Participation on Non-Agenda Items**

None

**V. Board Comments.**

None

**VI.** **Agenda Items**

**Habitat Mapping and Analysis Update**

Ms. Camery provided a brief update on the Habitat Mapping and Analysis Project. The lidar and imagery phase of the project was completed in June and described the wetland methodology phase of the project is underway. The Board reviewed the draft and final wetland methodology Scope of Work in March and May. The purpose of the wetland methodology contract is to provide a sound scientific basis for the Juneau Wetlands Management Plan update, to ensure that the methodology addresses Southeast Alaska habitat conditions, and to ensure that results are repeatable and consistent. She explained that Dr. Adamus is working on a complementary grant from the Southeast Alaska Land Trust, noting that the goals are similar but SEALTrust is southeast-wide and the CBJ grant is by necessity confined to CBJ boundaries.

(Notes from this point onward are intended to be as detailed as possible, and are therefore in bullet form instead of paragraph form.)

#### Methodology overview

- Dr. Adamus (hereafter Paul) described his academic background, his experience with the first JWMP, and his work on other wetland methodologies throughout the country.
- Paul described the difference between function and value. Function is the intrinsic characteristics of a wetland, what the wetland does naturally. The value is the “who care” question, based on what’s upslope and downslope and what the community care about. Rare species correlates with value rather than function.
- The methodology includes 18 functions. Each gets a score of 1-10. The list is a compromise and combines many things. It could be split further apart. It can also be collapsed from 18 to 8 categories.
- Paul has not assigned values to carbon sequestration or nutrient export, because all wetlands do this—it’s a diffuse benefit throughout all society.
- A high score for wetland stressors and ecological conditions indicates a prime opportunity for wetland restoration.
- The methodology user needs an environmental degree and training, with some environmental experience. It’s not necessary to be a certified wetland delineator, and you don’t need to know all the wetland plants.
- The model has office data forms with questions that can be answered from the UAS website. The website has wetland maps, maps with land cover, topography, DEC water quality maps, etc. Other data is available through google. UAS website: <https://seakgis.alaska.edu/flex/wetlands>. Kim Homan at UAS directs the site.
- The methodology includes two field data forms and 130 questions. It can be done in 1-2 hours. Users are not required to measure things—just choose an option. In most assessments, there are many fewer questions because you skip unrelated questions.
- The scores come from a model put together for each of the 18 functions. E.g. carbon sequestration factors include what type of wetland, how much does the water fluctuate, how much is flooded seasonally, persistently, etc.
- For each of the models, there are 6-40 variables. Not all get used. The models are context-specific.
- There are 700 rationales listed with the literature review to support the assumptions behind each of the 130 questions and formulas. Some is common sense and doesn’t need data. For other things, we don’t know for sure because the data isn’t there, so we develop a hypotheses based on Best Professional Judgment, Paul’s 30 years of experience, and checked through Peer Review Workshops. Model uses the best available science. In some cases there are competing theories. In those cases, the rationale lists both theories. This can be changed when the data is updated.
- Some indicator variables are on a score of 1-10. Others are 1-4. This makes it look like some are weighted more heavily, but it’s all converted to 0-1 in the final formula. All indicators are put on an equal playing field, then combined into a model.
- Models are based on logic documented by best available science. There is an element of judgment.
- Paul is often asked the question of whether the results have ever been scientifically validated. Paul is working on this for Alberta. He has a 12 page analysis which

documents that it would take 5 years and 3.2 million dollars to fully validate the method. He said that no wetland rapid assessment method has ever been validated, and they're actively used all over the country. He said the alternative is to leave it up to the Corps of Engineers or consultants. The Corps typically uses a 2 page evaluation sheet that is often criticized as arbitrary. The rapid assessment method is not the whole answer but it shows the connection with science and policy decisions. It provides a documented paper trail of the wetland functions

- Ms. Hoferkamp asked for an example of a question that is judgment based, and Paul gave an example of a question that asks for an estimate of micro-topography on the site. He said that training would provide the necessary background to get consistent responses for this question. Ms. Camery noted that the most challenging judgment based questions in the method could be described in more detail in the "WESPAK for Dummies" requirement in Paul's contract, to ensure consistent responses. Paul noted that it's the variability in the final score that counts, not the variability in questions. He said that in Oregon tests, the confidence for the method was -1 to +1. So a score of 7 could have a range of 6-8.
- Ms. Wright noted that the regional numbers are currently based on 32 wetland sites. Paul noted the requirement in the CBJ and SEALTrust grants to greatly increase this number, and the number will continue to build during the field work for the Juneau Wetlands Management Plan next summer.
- Mr. Geiger asked about the methodology's ability to classify anadromous fish habitat, and said that the methodology needs to estimate something that can be measured separately.
- Paul described studies that he has done to see if the scores correlated with actual measurements, and they did. Paul said that if he had data on wetlands in Southeast with a fish metric, he could run the model on those sites and test it. Ms. Camery noted the requirement in the Scope of Work to correlate methodology scores with scientific data at sites that have been actively measured. Dave D'Amore has connected Paul with these sites. Paul noted that the methodology is not a predictive model.
- Mr. Geiger noted that there's a huge value in having a systematic approach to come up with a rating. But he's having a hard time getting traction with a scientific critique.
- Paul said that's why we have Peer Review Workshops—it's the next best thing to measuring in the field. He said that ideally the Peer Review would take place over six months rather than one day, but we don't have that luxury. The other approach is field review and each scientist's reviews with their specialty, but that level doesn't think through all the indicators and process that could affect the score. Paul believes the office peer review workshops with one on one interactions are the most effective.
- Mr. Campbell said that longevity validates the process in itself. A process that is flawed will have issues along the way. You have a continuing effort to refine it.
- Mr. Geiger said that you could do spot-checking for sensitivity. Paul said that amphibians and bird are relatively easy to survey, but water quality analysis is expensive. Productivity and survival would be ideal but it's even more expensive.
- Ms. Wright asked if we could look at results for how it has been rated in different places over time. Paul said he could send scores from the upper Deschutes watershed in Bend. However he noted that if you average a lot, it will mute the variability but it will make it a less sensitive score.

- Mr. Geiger said you could pick a sample wetland that you think is very valuable or less valuable, and see how that shakes out. Paul said you'd need agreement from scientists on what has the highest value. Ms. Camery noted that the Montana Creek wetland complex is generally agreed upon as very high value.
- Mr. Miller said that the final score should be on a separate page of the excel spreadsheet so users don't try to skew the score. Paul said that nothing cues them into the formula for the final score. It's set up so people can't intentionally push it one way or another.
- Mr. Geiger said that if we picked some representative functions for a key wetland area, e.g. Montana Creek, we could develop objective criteria for finding an ideal example. Paul noted that we would want many examples, a range of sites that are low to high.
- Mr. Miller asked about the repeatability and predictability of the model. Ms. Camery described how this testing is built into the wetland methodology contract that the Board helped develop, and gave an overview of some key elements.
- Paul described how he does not pick favorites among the functions in the methodology. They can all be weighted differently according to what the community chooses. He described how one community in Oregon took the highest score for any one function, and that became the wetland score. Other community focused solely on salmon benefit. It's up to the public process.
- Paul noted that the raters answers to questions feed into the model which gives a score for value, but it doesn't say that one function is more valuable than another function. Paul said that you could say that if a wetland scores high for both function and value, it's an important wetland, but if no one in Juneau cares about wetlands, it wouldn't be a high value wetland.
- Board members asked how the public process would work for the Juneau Wetlands Management Plan update. Ms. Camery explained that she couldn't say exactly because this is a new process for her, but she anticipated that the WRB would make a scientific recommendation, and the plan would be presented at many public meetings followed by Planning Commission and Assembly Committees and the Assembly. She described a scenario where the Planning Commission or another body could say that the only wetland function that matters is water storage, to deal with flood issues, and minimize the weighting of the other functions. She said it could go many different ways, and noted that the grant calls for a Draft Juneau Wetlands Management Plan, not final.
- Mr. Geiger noted that values are ranked separately from functions. Ms. Camery said that water storage could have a heightened value for flood mediation, if Planning Commission chose to do it that way. The public process establishes the value, which can be higher or lower than the limited value ranking in the model.
- Mr. Geiger said that the board's task is to see if there's reasonable rater agreement.
- Mr. Campbell stated that the Board will need to build consensus among user groups.
- Paul said that for the public, this is way too complex. Not even the Corps uses science—they use a two page form.
- Mr. Geiger said that we need to see if the model adequately captured a few specific functions. The Planning Commission will expect that the WRB does this.
- Mr. Miller said that we need to build consensus on setting the value. The Planning Commission will be an easier sell than the Assembly, because the final wetland categories may be more stringent than what's already in place. Someone's category C

wetland could be turned into an A wetland. He described the parallel with the new flood management rankings.

- Ms. Camery explained that the new JWMP follows the same approach as the old JWMP, so it's not really a new plan. She described how the 1992 plan (still in effect but obviously outdated) promoted both protection and development, by identifying low value wetlands that had an expedited review process. The low value wetlands identified in the plan were developed rapidly, and that's why CBJ ultimately lost the general permit authority to regulate these wetlands—they're almost all gone. CBJ would seek general permit authority for low value wetlands again when the new plan is developed. She described that in the worst case scenario, if the public process turned against the plan or if the State of Alaska took jurisdiction over wetlands (which they've talked about), then the new JWMP would simply be good scientific information for agencies and other entities to use in planning. If that's the worst case, it's still of benefit and worth going forward.
- Mr. Miller said the new plan could get huge public attention. Some people would gain and some would lose. Mr. Campbell and Mr. Geiger asked Dr. Adamus whether there was any indication of whether the new methodology and new science would make scores go up or down. Paul responded he doesn't have a quick answer, but he doesn't think that the new sciences has made scores likely to be higher or lower. He noted that he will be comparing the original 1992 scores with some new scores this summer. He said that some things weren't even listed in earlier wetland methodologies, which are now considered important, such as carbon sequestration, water cooling and warming, and stream flow support. He said the methodology gives a paper trail because the scientific assumptions are broken out more specifically.
- Paul noted how in the final update, you would need to separate out individual properties from larger wetland units. You'd use a weighted average score. For example you'd weight the Montana Creek wetland as a whole versus the driveway right of way score. You'd take the average for the whole and average for a tiny piece. (needs clarification...)
- Mr. Campbell noted that certain developments could change the factors, change drainage, etc. He asked if you would go back and re-score later. Paul said that's not practical and politically feasible. The methodology needs to be frozen at one period of time so scores aren't constantly changing for landowners. Ms. Camery noted that this methodology needs to be formally completed and accepted by the Wetlands Review Board and the Habitat Mapping Working Group by October, so there is a final, official version for use in the Request for Proposals for JWMP update.
- Mr. Geiger said we should develop ideal cases and send out multiple raters to see if ideal habitats will score the way we want them to.
- Mr. Miller said that after the training we could send folks to Montana Creek. This should be done independently.

## **VII. Pending Permits and Updates**

### **1. Board Vacancy**

Ms. Camery reminded the Board that there is still a vacant seat, and the application process is on-going through the city's website.

## **2. Statter Harbor.**

Ms. Camery explained the final process for Statter Harbor approval and the substantial beneficial change of vegetative rip-rap.

## **2. Lemon Creek Gravel Extraction**

Ms. Camery stated that the second appeal, through reconsideration at the Assembly level, also failed and therefore the Planning Commission's approval of the permit still stands. SECON is expected to apply for another gravel extraction permit much farther upstream, away from all residential areas.

## **VIII. Planning Commission Liaison Update.**

Mr. Miller described the Statter Harbor final approval in more detail.

**IX. Next meeting:** August 15, 5:15 p.m., City Hall room 224.

The meeting was adjourned at approximately 7:45 p.m.