

**ASSEMBLY STANDING COMMITTEE
LANDS AND RESOURCES COMMITTEE
THE CITY AND BOROUGH OF JUNEAU, ALASKA**
October 26, 2015, 5:00 PM.
Assembly Chambers

I. ROLL CALL

II. APPROVAL OF AGENDA

III. APPROVAL OF MINUTES

- A. September 28th, 2015 Lands Committee Minutes

IV. PUBLIC PARTICIPATION

(Not to exceed a total of 10 minutes nor more than 2 minutes for any individual).

V. AGENDA TOPICS

- A. Preliminary Draft Juneau Wetlands Management Plan Update
- B. CBJ Stream Mapping Project

VI. STAFF REPORTS

VII. COMMITTEE MEMBER / LIAISON COMMENTS AND QUESTIONS

VIII. ADJOURNMENT

ADA accommodations available upon request: Please contact the Clerk's office 72 hours prior to any meeting so arrangements can be made to have a sign language interpreter present or an audiotape containing the Assembly's agenda made available. The Clerk's office telephone number is 586-5278, TDD 586-5351, e-mail: city.clerk@juneau.org

**ASSEMBLY STANDING COMMITTEE MINUTES
LANDS AND RESOURCES COMMITTEE
THE CITY AND BOROUGH OF JUNEAU, ALASKA
MINUTES**

September 28th, 2015 5:00 PM.
Assembly Chambers

I. ROLL CALL

Jesse Kiehl called the meeting to order at 5:01pm.

Members Present: Chair Jesse Kiehl and Assembly members Mary Becker, Jerry Nankervis, and Kate Troll

Other Assembly Members Present: Karen Crane; Loren Jones; Debbie White

Liaisons Present: Bill Peters; Gerry Landry; Christopher Merti

Liaisons Absent: Mike Peterson

Staff Present: Greg Chaney, Lands Manager; Dan Bleidorn, Deputy Lands Manager; Beth McEwen, Deputy Clerk; Teri Camery, Senior Planner; Beth McKibben, Planning Manager

II. APPROVAL OF AGENDA

There were no agenda changes.

III. APPROVAL OF MINUTES

A. August 24, 2015

The minutes of the August 24th, 2015 Lands Committee meeting were approved as amended.

IV. PUBLIC PARTICIPATION

There was no public participation on non-agenda items.

V. AGENDA TOPICS

A. Wetlands Management Plan Update

Mr. Chaney: A quick introduction. This is Teri Camery. She is going to be presenting a project that started about five years ago so it's been a long time coming. We've been using a lot of data from this for other purposes already, but the actual Wetland Management Plan part is finally ready for preliminary roll out.

Ms. Camery: Hi my name is Teri Camery, and I'm a senior planner at the Community Development Department. I want to start off by thanking you

for your time in looking at this and taking the time meeting with us this evening. I know you have a lot on your plate, and this is a lot to read, and you had almost no time to read it, so our intent this evening is to make it easy for you. I will give a brief overview of the project and then pass it off to our consultants who can tell you more of the details, and then move into the implementation section. Our intent is to bring this project back to you at your October meeting, and then you can provide comments to us at that time, particularly on the implementation chapter. By your October meeting, we hope that we will have comments to share with you from the Planning Commission and the Wetlands Review Board, and that should help to improve the understanding of the overall project. In 2009 we did a CBJ evaluation that favored an updated Wetland Management Plan instead of a mitigation bank. There's a little bit more information about that in your memo. So following that, we obtained a large federal grant in 2012-- a \$1.6 million federal grant--that contains a number of different elements including LIDAR, imagery, and stream maps, as well as the Wetlands Management Plan update. In 2013, we issued a request for proposals for the work, and in 2014 we began the wetland assessment fieldwork with Bosworth Botanical Consultants who are here to present to you tonight. The goal of the project is to develop a long range planning document to assist public land managers and interested private land holders with practical management of their properties. With that, the plan provides consistent scientific methods of identifying and evaluating wetlands so property owners can make good development decisions. The key thing is that this information is provided in advance, and it gives information on which wetland areas are higher value, low value, and most appropriate for mitigation versus more appropriate for development. As Greg said, CBJ Lands has already been using this information in planning for two city subdivisions. Talking with Dan earlier today, we estimate the project has already saved the City roughly \$20 to \$30,000 dollars just on those two subdivisions alone. I want to give an overview on how we chose the assessment areas for the project. We identified large, vacant parcels along the road system that were likely target areas for development over the next 20 years. We sat down with our cartographer and our database, and we looked at the acreages, we looked at what was undeveloped, we looked along the road system and developed our priority areas from there, and that became the basis of where we directed the consultants to do the assessment work. With the focus on large, undeveloped parcels, most of the land ended up being city property. We identified approximately 20 private parcels that fit that category and we offered free wetland

assessments to those private property owners. We contacted them by mail, through phone, and through email. We received permission from 5 property owners to do those assessments so that work is included in the plan as well, but it is primarily city property. The consultant gave presentations to the Wetlands Review Board and the Habitat Mapping Working Group last week. The project goes to the Planning Commission on October 13th. CBJ comments are due to the consultants by November 15th, so we are requesting comments from all these entities by the end of October and again that gives us time to come back to the Assembly and Lands Committee a second time with more information for you, including a recommendation from staff on an appropriate implementation route to take. We just received the document ourselves so CDD has not yet made a recommendation on what path to take. One last quick fact that you'll find interesting: In the original Juneau Wetland Plan, 54% of the study area was wetlands. We are pleased to report that in the current project area, we are at only 44%. I will now pass it on to our consultants.

Mr. Adamus: I'm a member of the faculty at Oregon State University, and I'm a consultant on this project with Bosworth Botanical Consulting. I've been involved in Juneau wetlands since 1985 and off and on over the years since then. My specialty is using science to identify which wetlands may be the most important. I've been a consultant to the governments in Oregon, Washington, and province of Alberta, and in every case I'm trying to bring science to help answer the question about which wetlands might be most and least important. So the members of the team- Koren Bosworth, myself, Francis Naglich, and Teri Camery as the organizer. I did the original study design but most of the field work was implemented by Koren and many subcontractors. The purposes in a nutshell are in the selected areas- the priority areas- that were chosen by your planning department to map areas that aren't wetlands. We are just going out to find what is and is not wetlands. By giving certainty to areas that aren't wetlands, it helps people understand where construction could proceed without a permit, or with minimal requirements from the federal government. Where wetlands areas are found, our purpose was to determine which are the least or most important. We also determined areas that might require less compensation when people are dealing with federal agencies. As many of you know, there are perception problems about wetlands. Believe it or not, most of these areas are wetlands [Mr. Adamus pointed to pictures] but most people wouldn't know. How do we know these areas are wetlands? It takes specialized skills, and there are very specific protocols that the Corps of Engineers and other federal

agencies have had in place for over 30 years. Those protocols are based on the soil type, soil saturation, and vegetation. Those tell us where the line is between wetlands that are legally regulated and areas that aren't wetlands. Some key facts to keep in mind: construction in wetlands is not forbidden absolutely. The way the law was set up over 40 years ago was that you need a federal permit in some cases, but not all. Also federal procedures for determining what is and is not a wetland have existed for over 30 years. This is not some new game on the block that's been invented by the agencies. Most of us on the Bosworth team have been practicing this for that long. And the fact that a city like Juneau has few growth options does not guarantee leniency from federal agencies. A lot of cities are in the situation of not much buildable land and too many wetlands, but that's just a fact of life. The permitting agency-the Corps of Engineers- does encourage regional and watershed scale to wetlands planning and that's exactly what your CDD- through this grant- has implemented. We feel that we're really at the cutting edge of where things are getting done in terms of the federal agencies with wetlands planning. Some of the benefits of this study are providing accurate wetlands maps and science based ratings to these wetlands as a public service, which can reduce time delays and costs to developers, increase certainty in the permitting process, promote fair and more consistent planning decisions, and we think it will minimize environmental damages from wetlands loss. We're already seeing some benefits from this study. There were two main components for this study: one, the wetland boundary determinations where we used federal procedures, and the other is a wetland functional assessment to see which wetlands are important and what are they important for. The City and its various committees recommended the standardized assessment tool that I had created called WESPAK-SE, and I developed this well before the study began CBJ monies and grant monies through Southeast Alaska Land Trust. It was tested and peer reviewed, and felt we had a good method to understand the functions of these wetlands individually. Dealing with the first piece- boundary determinations- the two things we used there are the aerial photography and LIDAR to get at the topography. We began with those and then did ground level surveys walking through the brush and using GPS to map the areas. We now have a very solid idea of where the wetland boundaries are, giving much more certainty to areas in the future. [Throughout the presentation, Paul utilized map examples to show the capabilities of aerial imagery, such as how high the vegetation is in certain areas or how large the wetlands boundary is based on the map and then based on ground

surveys.] The City asked us to divide the wetlands into multiple assessment areas. It's not helpful to have one rating for wetlands. It's more practical to break the wetlands into pieces and label the importance of each piece. The minimum assessment area size was one acre. We ended up mapping 94 separate wetlands, but when we divided them into their different parts, we ended up with 345 assessment areas. We define the assessment areas with the imagery, whereas the wetland boundaries are what we did on the ground. The two things we used to break up the assessment areas are wetland type- there are seven types of wetlands in southeast Alaska that are recognized by the tool I developed. These types relate to the functions the wetlands perform. We mapped these different types into priority areas, which was helpful in defining the assessment areas. The other thing we use are watershed boundaries. We did some computer modeling with LIDAR to define where the watershed boundaries are, based on where the stream boundaries are. [Paul points to a map to show how the watershed divided one wetlands piece into two based on water flow.] What do we use to determine what is an important wetlands? We use our wetlands functions. These are things that wetlands do naturally, which is associated with each function as a value such as water storage. Some wetlands can store water. Who cares? The value question gets at the 'so what' question. If you have a wetland that stores water, if downstream from that wetland there are some culverts and bridges that get washed out from a flood, that wetland, if it is storing water, will become more valuable. You will see throughout our report, for each wetland, a series of function scores and a series of value scores. A wetland can have a high level of function but low value if there is low human or ecological benefit for having that wetland there. Conversely, a wetland can have low function or high value, so we have again for each one of these factors, everything from anadromous fish, to amphibians, pollinator habitat, and water storage, and so on. We have a score, and with that score, a rating. Using some acceptable statistical techniques, I have converted the scores to 'high', 'moderate', or 'low' for every case. I could just have created four categories -A, B, C, D- but some of the agencies are going with the three levels. In volume two of the report, we have two to three pages on each wetland with their scores. These scores were generated by computer models I put together on a spreadsheet based on my experience as a wetlands scientist and from the technical literature and peer review comments from some of your local wetland scientists here in Juneau. Another way we have presented the scores in volume one was that we took one function and ranked all the wetlands. We sorted the data again in

two ways: one by function where the sites are ranked and the other, for a given site, with 'what is the site best at' and 'what is it worst for'. You can see that for different functions, some wetlands are better than others. [Paul discusses a wetland map and shows how one is good for carbon sequestration and the other is good for phosphorous.] Different wetlands are good for different things that have been incorporated into our assessment tool. Although these scores are from zero to ten, they have different distributions. [Paul discusses his presentation and shows that two-thirds of the 345 wetlands have no anadromous fish]. This gets to the big question: If you have these eighteen functions of a wetland, how do you combine these into one score for the wetland? We were asked not to do this. The CBJ could have had us assign an overall score, but that wasn't a part of our contract. It's kind of good thing because I don't think it's the purview of the scientists exclusively to decide which functions are more important than others in terms of when you combine the scores. One could just take an average of all those scores and say whatever the average is that represents the wetland, but there could be members of the public that feel that anadromous fish and salmon are more important than aquatic invertebrates and amphibians, and we have ratings for both. And they might want to see a weighted average, and there is a whole bunch of ways that you can combine these options mathematically. I list some of these options in your report, and I would call attention to your implementation section in volume one. We would very much welcome your comments on that- whether you think three rating categories is good or the old system of four categories, how to combine the function and value score, how to roll up these scores into one score per wetland, or one rating per wetland. Ultimately, the Corps of Engineers is the one that decides on wetland permits, but if we wait until the Corps of Engineers tells us how to roll up the scores, we may be waiting a long time. The second option would be for you, as the Lands Committee, to make some recommendations, or even just plow ahead and do it. Roll up the scores, tell us how to roll them up, and we can go ahead and do it that way, with no guarantee that the Corps will accept it. A third option is right now, SEAL Trust is part of the responsibility within the fee program for wetlands in southeast Alaska. They are coming up with a process for rolling up the scores of weighing different functions and so on, and whatever they propose to the federal agencies, you might take a 'wait and see' attitude and see if the federal agencies shoot down their idea or accept their idea and go with that. You have some options. I'll leave it at that and turn it over to our next speaker.

Mr. Naglich: Thank you, Paul. Assembly members, I'm Francis Naglich, owner and president of Ecological Land Services located in Longview, Washington. We have a couple branch offices in western Washington but, have worked here in southeast Alaska for about four years doing wetland delineations, some permitting, and working on a couple mitigation banks as well, trying to provide mitigation on the mitigation side of the equation. We worked on this team as well and had a couple folks from our company up here doing assessments in the field, doing the field work, and helping with the delineations or at least the mapping of wetlands. Paul covered really well the science part of it, and I get the fun part of implementing that science for the use of planning purposes and how the City moves forward with developing its own land, and guiding private land owners on how to develop their own land in the future. I do want to emphasize that this implementation chapter is a work in progress. We have been taking comments from every group we've met with, and we're going to take comments from you guys as well as your concerns, and probably modify that as we need to before we have the final document. To give you a little backdrop on implementation and my history- within most of my company, and we have about 25 professionals working and managing and delineating and permitting wetlands, I'd say 85% of all our clients are developers that are hiring us to get a job done. My company comes with that kind of experience working in the permit world. It's a challenge to get permits through the government, but there are good ways to do it and a lot of what you've done here is a good first step for that. A little backdrop to implementing- remember that the Corps of Engineers wants you to avoid impacts first. If you can't avoid impacts to wetlands, minimize. If you can't minimize, mitigate. There is always that sequence going on. By mapping these wetlands and classifying them by function, you're actually doing that. You're trying to avoid the high quality ones for the functions they provide to society and the environment, and you're going to try and focus your development on the lower functioning wetlands where you can replace and mitigate those impacts. A federal rule came out in 2008 by the Corps of Engineers and EPA, so we've been living under that for 7 years, and the federal rule recognized that the onsite mitigation that developers were doing was failing. They were postage stamp mitigation sites that just didn't make sense. They weren't functioning for the environment, so through the federal rule, they have emphasized the role of mitigation banks and fee programs, and they have also targeted, in hierarchy, restoration being first, enhancement of wetlands, and preservation of wetlands from development as another option. In Alaska, a lot of

preservation happens but it's a difficult argument sometimes because a lot of land is already government land to begin with. Preserving more land is a hard thing for us to wrap our minds around and the federal rule only allows preservation in some situations, and we do believe in the work we do in mitigation banking that there are restoration opportunities out there that could make mitigation a commodity that developers are interested in buying to further their projects along. There is a hierarchy established under federal rule for the type of mitigation you do and the vehicle of that mitigation. Mitigation banks are first, and the fee programs second. Permitting responsible mitigation, where the developer does their own mitigation, is going away. It's harder and harder for clients to want to do that, and most clients don't want to do mitigation. The federal rule also wants you to use a regional approach. The goal here is to also provide certainty to developers, the City, regulators, mitigation bankers, and fee providers for the ground rules so if you can do a commodity exchange between development and a mitigation provider, what's the commodity that makes sense- acres, function, things of that nature? Ultimately it helps your city determine where it should be growing and developing in the future. We looked at three potential approaches to implementing this. One of them is kind of light- using all this information for planning purposes only. Second would be going back and doing a Corps permit which would be a regional permit for your city, and you've had one of those in your past and you could do it again. And the third would be more aggressive and actually you as a city implement your own management codes and policies governing wetlands. I lived in Washington state where every city, every county has its own regulations on wetlands, which means that every developer has to go through two or three permitting processes to get to a project, which is good for us consultants but not the clients. Option one is using all this information to be kept at planning level purposes so people know what's on their land or CBJ land, and the Wetlands Review Board which is part of your city government would comment on those permits but not take an active role in decisions but give recommendations. This wouldn't make it any easier for the committee process since the Corps would be the ones giving the permit, although they would have a lot better information. Second option would be revisiting what you had at one time which was a general permit. The way that works is the City applies for coverage under the Corps for activities in certain types of wetlands- maybe there are residential commercial projects in low functioning wetlands or maybe it's a regional area- and you look at all the areas you want to develop and you say 'we want permits in advance for

these types of activities' and the Corps would potentially issue that and allow you basically to move through an expedited process as you move forward to develop those lands. It would be an advance agreement from the Corps. I've worked on one in Washington State that works really well for port districts for industrial development, but they have them in Florida, Illinois, and the Corps even has general permits in Alaska for placer mining and other types of activities. Like I said, you had one here in the past. It does require renewal every five years, but it might be a great way to integrate all this information into a tool that's useful for well thought out development. Third option is more aggressive, which would be that the Assembly would direct staff to develop their own policies on all or certain types of wetlands. From a developers perspective, what this means is 'I have to get a permit from the CBJ and from the Corps'. You can see some obvious political ramifications for that, however it may give you predictability in the processes, and most of the developers I work with, it's not usually cost being the issue, it's the unpredictability. It's not knowing whether they're going to get a permit or not. Most of my clients are happy to pay mitigation- 'just give me the answer, and if it's not going to work, tell me "no" and tell me "no" early so I don't waste my money'. This is the most challenging aspect from the developers' standpoint for developing in and around wetlands. Paul and I are here to take questions.

Mr. Nankervis: Earlier on in the presentation, there was a comment made- 'watershed scale approach'. I have absolutely no idea what that means.

Mr. Adamus: So typically watersheds are where rain falls into a basin and drains down one river, or one stream, or another, so the watershed approach is looking at watersheds like the Yukon watershed. The Corps of Engineers in that federal rule wanted all the mitigation proposals to look at a watershed approach during mitigation. For example, if you're impacting a wetland in a watershed in Juneau, it's probably not appropriate to run down to Ketchikan and say 'Well I've done mitigation in Ketchikan so that covers the Juneau wetland'. That's kind of the gist behind it. Watersheds can be very challenging in southeast Alaska because there are a lot of watersheds and they all drain into the Sound. That gets more challenging but the Corps and the agencies have divided these watersheds up into HUCCS, which are Hydraulic Unit Codes, and they have drawn these watershed lines. I don't think this survey was specific to any one watershed. It was more CBJ looking at where lands where most likely to be developed in the future due to road networks, elevation, and topography.

Mr. Nankervis: I get the watershed approach but I don't get the scale approach. What you're saying is limit the scale of your approach to a watershed, not look at two watersheds? Is that what you're saying? Because I understand what you're saying, look at how it affects a watershed because different watersheds are going to be affected differently but watershed 'scale', the 'scale' word kind of through me there.

Mr. Adamus: We're looking at wetlands not as just little isolated units but we're looking at a whole series of wetlands that may connect, and looking at the performance of those, so the geographic scale is large as opposed to most wetland planning up until now, which scales each wetland one by one by one.

Ms. Becker: In the general permit, you said we used to have this and it needed to be renewed every 5 years. Does that mean we did not renew it, should we have- is this something we should have for wetlands?

Mr. Naglich: Maybe Greg can help answer that. He was around till the end of that, but it sounded like a lot of the lower functioning wetlands that CBJ were involved with managing under that original permit were either impacted and gone away, they were developed, or there wasn't as much need for it.

Mr. Chaney: Teri can clarify this, but I believe our overall permit ran its course and we did successfully permit fill in most of the lower value wetlands, which is what we had authority over. High value wetlands were still under the Corps purview. It was a successful program but it expired, and we need this study or something like it to start up again if we want to do that.

Ms. Becker: To start up having a general permit?

Mr. Chaney: Yes. We needed the base information to do that because we filled almost everything we got a general permit for, and I'm a big fan of the old permit, but it's over.

Chair Kiehl: Further questions?

Mr. Nankervis: Early on, I believe it was staff that commented on volume two and volume three. We were only provided volume one. Volume two has all the maps, I'm not sure what three has but we only have one. In the memo, it says 'try to confine your review to volume one'. I would guess that's to keep us from getting lost in the weeds, so to speak. Could you speak to that?

Ms. Camery: Absolutely. We were afraid you might not show up if we gave you volume two, because volume two is 453 pages.

Chair Kiehl: 459.

Ms. Camery: 459 [laughs]. Jesse's looked at it. You are welcome to comment on volume one or volume two. We thought it best for your sanity to focus you on volume one, particularly the implementation chapter.

Volume two essentially contains all the charts, and photos, and maps associated with all three-hundred and forty-five wetland assessments. There is no volume three so I apologize if there's a miscommunication there.

Chair Kiehl: Mr. Mertl and then Ms. Troll.

Mr. Mertl: I guess I have a question in terms of options two and three. I think its fine the City and Borough can manage its own lands how it sees best fitting but what I'm concerned about is implications to developers on private land. I'm kind of interested in if we're not going with the postage stamp or looking more at watersheds- I can explain that to you later- trying to find that balance between science, what you want to do, get away from the postage stamp type of delineations in permitting, but as we move forward implementing this, getting a clear understanding on what are the implications for developers on private land, how do we try to minimize and make it a streamlined effort for them. Its currently not, I can tell you that much. I do delineations and permitting myself and it's very frustrating, and I just don't want that extra layer. Hopefully going through this process, finding a way to streamline and perhaps make it easier for developers?

Mr. Chaney: If I'll just jump in, one thing I know for sure from the development perspective is that having this information clarifies what you have up front and helps you plan ahead rather than have this show up later, which is really awful.

Mr. Naglich: I think you would totally want to include all private lands and CBJ lands in a general permit, and you'd probably want to have some of the key landholders at the table and ask what would work best for them, or a regional permit for what would work for them. Remember when they're at the table and they're hearing from the court just like you guys are, they're going to know what they can do and what they think is reasonable and what they can provide for mitigation- maybe there's land they could set aside permanently for protection, and we've done that on some of the regional general permits we've done, and that's kind of what you're required to do, but at least it gives you a tradeoff that you have some land to work with, land that's developable. I agree- there's no point in doing a general permit unless it gives some certainty to folks that they can move through a process. It doesn't give you a blanket approval but it sets the sideboards for if you meet these certain criteria, and you've delineated your wetlands, and you figured what your impact is, and you're within that area that was carved out, then yes, you'll get a permit and your mitigation will be "X" but I agree, it has to be predictable.

Ms. Troll: I was getting interested in the whole idea of trying to determine wetland values, and seeing how the objective of this is to integrate into a permit system better, whether it's the general permit, I would think that one layer you'd want to put on this is, which of these wetlands trigger another additional permit. For example, we know that if there's anadromous fish, we're going to have a Title XVI permit, if there's an eagles nest there it's a Fish and Game issue, and certain wetlands are going to be important for flood purposes and there's permitting related to that, so I'm wondering if you're going to take that kind of look at these various wetlands when trying to come up with the high value and low value.

Mr. Adamus: I like that suggestion and I think the best way would be to add a section of text- a narrative- that explains that, or those eighteen functions do relate to one law or another. Some cases indirectly- for example water cooling in the stream, that relates to the anadromous fish responsibilities of the agencies but it also relates to water quality, Section 401 of the Clean Water Act, temperature in streams, things like phosphorous and nitrate removal, that relates to Clean Water Act responsibilities, so I can see a need of more discussion for that.

Ms. Troll: Yes, there's an education value to the developers that they know that 'this particular piece of wetland also has layered on four or five additional permit processes, maybe I'll look elsewhere'.

Mr. Adamus: Yeah the Corps of Engineers says only that the proponent should look at the functions and values of the wetland. They don't ever say which values or functions. And there isn't anything that says that that list of functions has to be limited to the legal mandates of other agencies. We have tried to confine it mostly to that, but there are other things like pollinator habitat. There's no law that regulates that, but it's a key part of the ecosystem and the functioning of the landscape.

Chair Kiehl: I note the clock. Mr. Chaney, let me turn to you or to Ms. Camery and ask, you went through initially, you're going to get comments from the Review Board, the Planning Commission- what is it you will need and at what time frame from the Lands Committee and Assembly?

Mr. Chaney: From the Lands Committee, we're going to be coming back at the next Lands Committee meeting and at that point will be able to report on what the Wetlands Review Board's comments were and the Planning Commission's comments were and hopefully have a staff recommendation for you to consider. At that point you can decide if you need more time, if you like the recommendations presented, and you can

have time to talk about it in the meantime, since you'll have a month, roughly. The next meeting is at the end of October.

Ms. Camery: This is just the preliminary draft. We were going to send comments to the consultant by mid-November. They will come back with another draft for mid-February and then we'll have the same round of meetings with Assembly, Lands, Planning Commission, and Wetlands Review Board. The grant expires in June, and we'll see how far we get through the process before that grant ends, and whatever we have left at that point we'll work on in our department or go out and find more money. I appreciate your time this evening.

Chair Kiehl: Thank you for this extensive body of work. With that, the charity of the clock is going to keep us from the comments portion of this agenda. We are adjourned.

VI. STAFF REPORTS

There are no staff reports.

VII. COMMITTEE MEMBER / LIAISON COMMENTS AND QUESTIONS

There were no liaison reports.

VII. ADJOURNMENT

The meeting was adjourned at 5:59 pm.



Community Development

City & Borough of Juneau • Community Development
155 S. Seward Street • Juneau, AK 99801
(907) 586-0715 Phone • (907) 586-4529 Fax

DATE: October 7, 2015

TO: Assembly Lands Committee

FROM: Teri Camery, Senior Planner 
Community Development Department

SUBJECT: Preliminary Draft Juneau Wetlands Management Plan Update
Follow-up to September 28, 2015 presentation

At the September 28, 2015 Assembly Lands Committee, CDD staff introduced the Preliminary Draft Juneau Wetlands Management Plan Update, followed by a presentation by the consultants Francis Naglich of Ecological Land Services and Dr. Paul Adamus of Adamus Resource Assessment. At this meeting staff said that we would provide comments from the Planning Commission, Wetlands Review Board, and other entities at the October 26 Lands Committee meeting to assist members with developing comments on the Plan.

Because Planning Commission comments will not be available until after the October 27 meeting, CDD staff will instead bring the JWMP Update back to the Lands Committee on November 30. In November we will be able to provide you with a complete package of comments from the Commission, Wetlands Review Board, CDD staff, and others.

CDD encourages Committee Members to focus on policy issues addressed in the Implementation chapter. Staff specifically requests the Committee to consider whether there is a need to categorize or rank wetlands, as described in the options; or if the document is sufficient as an informational resource and planning tool with the current scores, without ranking.



Community Development

City & Borough of Juneau • Community Development

155 S. Seward Street • Juneau, AK 99801

MEMORANDUM

TO: Assembly Lands Committee

FROM: Chrissy McNally, Planner II
Community Development Department

DATE: October 20, 2015

RE: CBJ Stream mapping project

INTRODUCTION

The Federal Coastal Impact Assistance Program (CIAP) grant awarded to the City and Borough of Juneau is comprised of three broad goals;

1. Acquisition of aerial imagery and LIDAR
2. Creation and adoption of stream maps
3. Update the Juneau Wetland Management Plan

In 2013, the contractor Watershed Sciences, Inc., now Quantum Spatial, completed aerial imagery, as seen in Attachment A, and LiDAR (Light Detection and Ranging) data acquisition from aerial surveillance within selected CBJ priority areas. LIDAR is a remote sensing method that uses pulsed laser to measure ranges to the Earth. This process generates three dimensional information about Earth's surface characteristics. This data presents precise and accurate information about elevation changes, which is very useful in determining where water courses lie. Derivatives of this data include the hillshade model used in conjunction with a stream modeling software, RiverTools 4.0, to create a stream layer for the CBJ (Attachment B).

The Alaska Department of Fish and Game (ADF&G) has regulatory authority over anadromous waters. Therefore, this project required significant collaboration with ADF&G staff. The development of anadromous stream maps is an important step for the Community Development Department (CDD) to accurately administer the stream side setback ordinance found in Title 49, the Land Use Code.

BACKGROUND

CBJ protects anadromous waters through the stream side setback ordinance contained in Title 49.

CBJ 49.70.310(a)(4) prohibits **development** “within 50 feet of the banks of streams designated in Appendix B of the comprehensive plan of the City and Borough of Juneau, 2013 Update...”

CBJ 49.70.310(b)(1) prohibits any **disturbance** within “25 feet of streams designated in Appendix B of the comprehensive plan of the City and Borough of Juneau, 2013 Update...”

CBJ 49.70950(f) instructs that the stream side setback shall be measured from the ordinary high water mark (OHW). Title 49 defines OHW as;

“...a line or mark impressed on the bank or shore of the non-tidal portion of a river, lake or stream; caused by the long-term action of non-tidal water, and indicated by erosion, shelving, changes in soil characteristics, absence of terrestrial vegetation, presence of aquatic vegetation, or other physical characteristics. “

Appendix B of the Comprehensive Plan is a list of rivers, lakes, and streams found in the Anadromous Waters Catalogue (AWC). The AWC is managed by the ADF&G which is solely responsible for maintaining anadromous waters data as well as revision, publication and adoption of the AWC. Streams are added to the AWC through an annual nomination process. Anadromous fish must have been seen or collected and identified by a qualified observer. Of the 18,000 streams currently catalogued, 210 lie within the City & Borough of Juneau.

Once a stream is nominated, ADF&G staff map the stream using Global Positioning Systems (GPS) equipment. Because of limitations in GPS equipment, anadromous waters are not always accurately mapped when digitized (Attachment C). While the LiDAR data does not indicate which streams are anadromous, it is extremely useful in correcting the digitized AWC stream maps. Correcting discrepancies in AWC streams will make protection for anadromous streams easier by more accurately reflecting where those streams lie. The LiDAR based digitized stream layer will be a more efficient planning tool for the department and the community by providing property owners with the most accurate stream locations.

PROCESS

CBJ and MIS staff initially met in June 2014 to determine the process for creating stream maps using the LiDAR data acquired in 2013. CBJ determined that additional software was necessary to model streams using the LiDAR data. CIAP grant funds purchased Rivertools 4.0 software. Using the new software, MIS staff produced a preliminary overlay of 124,357 modeled streams within the City and Borough of Juneau. These streams were then overlaid with the most recent

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version of the AWC. Staff then met with ADF&G staff to discuss what processes ADF&G would need to follow to correct discrepancies in the digital overlays.

Simply using the LiDAR data and CBJ stream layer, ADF&G staff were able to correct discrepancies in approximately 28 percent of AWC streams. ADF&G staff formally nominated the corrected streams and they will be reflected in the 2016 version of the AWC.

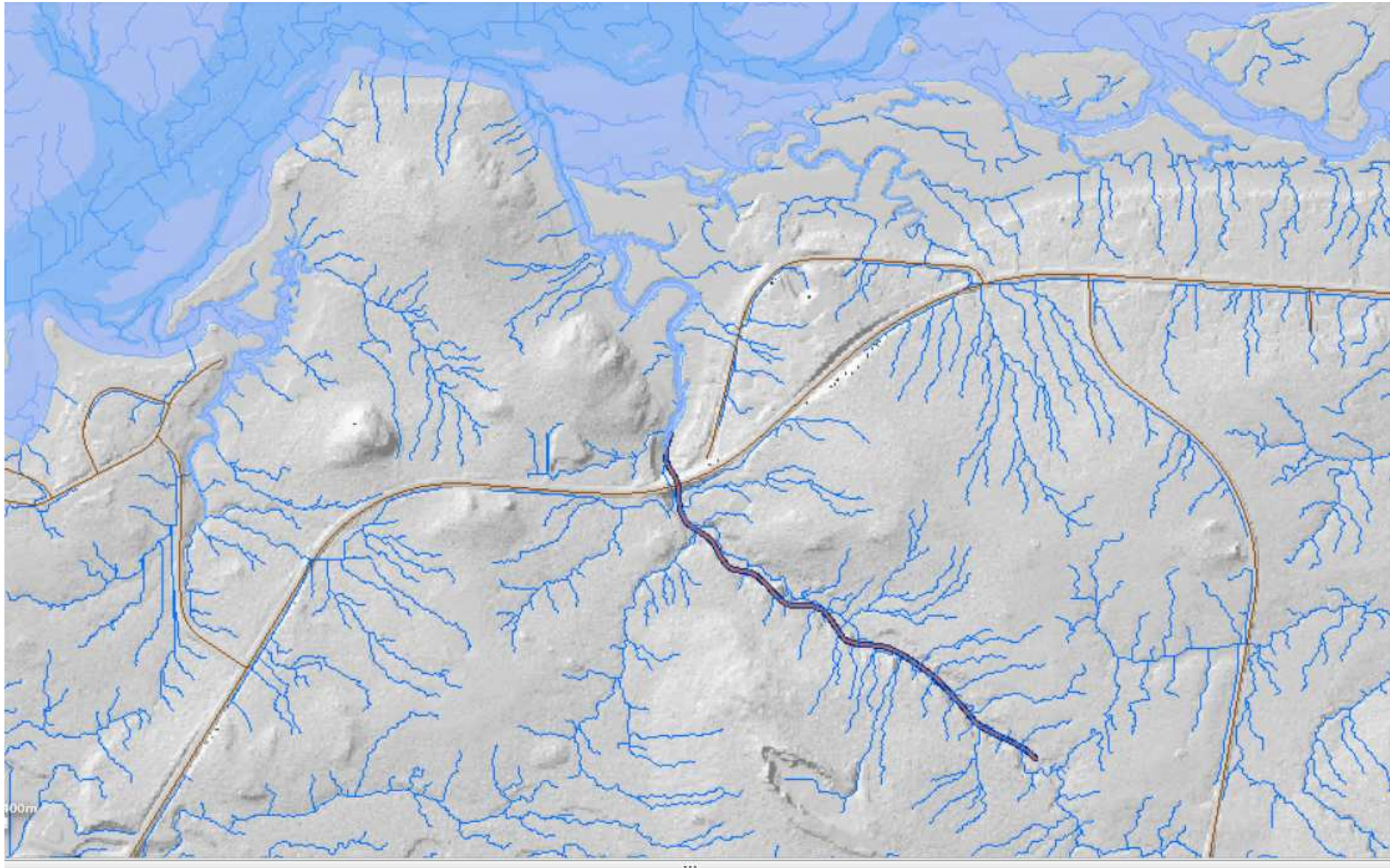
CDD staff will continue to work with ADF&G staff to further correct discrepancies in the remaining AWC streams where necessary. CDD staff is also working on developing a schedule to conduct field work with ADF&G where LiDAR data and the CBJ stream layer alone are not sufficient to correct a discrepancy. Once this effort is complete, CDD staff will explore updating the stream side setback ordinance to allow CBJ more autonomous control over anadromous waters determinations.

Attachments

- A: Aerial imagery of Downtown and West Juneau
- B: CBJ modeled streams in North Douglas
- C: Comparison of AWC stream layer and CBJ stream layer



Attachment A – Aerial imagery of Downtown and West Juneau



Attachment B – CBJ modeled stream – North Douglas



Attachment C – AWC/CBJ stream layer comparison – Auke Lake