

Meeting Minutes  
FBHCP Steering Committee  
3 December 2014

Steering Committee members present: Kipp Frohlich, Gary Appelson, Brett Moore, Jeff Gore, Danielle Irwin, Julie Wraithmell, Ryan Matthews

Others present: Jennifer McGee, Amy Knight, Mike Flaxman, Jimmy Sellers, Tom Ostertag, Brian Powell, Sally Davenport, Kim Colstad, Gene Chalecki, Robbin Trindell, Niki Desjardin, Colleen Donovan, David Mills, Ashley Blackford (FWS), Deanne Miller (DEP), Elizabeth Fleming (Defenders)

Phone: Bob Ernest, Robert Hardy, David Dell

## **WELCOME AND INTRODUCTIONS**

### **UPDATES AND REVIEW OF JUNE MINUTES**

JM We have a couple of updates on our Florida Beaches HCP team. We have a new Steering Committee member, Dr. Jeff Gore with FWC, who is based out of Panama City. He brings a lot of expertise to the group with over 25 years experience with the agency, largely with small mammals, but also with shorebirds and beach mice. We also have two additional Work Group members from Stratus Consulting – David Mills and Colleen Donovan. You'll hear a presentation from them later on about their role on the team and what they're working on. With that, we'll move into the next agenda item, which is approval of the minutes from the June Steering Committee meeting. Does anybody have any comments or edits?

BM I'll motion to approve the minutes.

KF Second. All those in favor

(June FBHCP Steering Committee minutes approved)

JM The agenda I sent out a couple of weeks ago has had some changes made to it. The first change is that Kipp Frohlich will be sitting in as the designee for Thomas Eason. We've also rearranged the schedule a little bit to allow for more time for our implementation discussion. The last two agenda items we had, which were staff reports regarding recent meetings with DEP staff, are now included under the Staff Report section. Lastly, our presentation on implementation roles and responsibilities will be given by Niki Desjardin instead of Bob Ernest. Are there any questions?

### **STAFF REPORTS**

JM We have put Chapter 5 (Species Accounts) up on the FBHCP website. We are getting much closer with Chapter 8 (Take Estimates), and you'll be hearing more about that from Mike later on. We've been working a lot on Chapter 10 (Minimization Measures). The BMPs and minimization measures have gone through several rounds of review. We've had three meetings with DEP CCCL staff to review BMPs, and we only got through about one BMP per meeting. So

we pulled back from that and decided to have more internal review with FWC staff before bringing it back to DEP staff. We want to avoid having too many meetings, and we want to make sure we're maximizing the time we have with the CCCL staff and getting good feedback from them. So we're starting to move forward with the FWC internal review. We're sending out the documents for review, and starting in January we'll have weekly meetings with FWC staff to get feedback. Finally, we've also been focused on Chapter 11 (Mitigation), which you'll hear more about later on in the meeting.

As far as additional meetings, we did present at the SEAFWA (Southeast Association of Fish and Wildlife Agencies) conference in October. I gave just a general update and re-introduction to the FBHCP. An abstract was just accepted for a presentation at the FSBPA (Florida Shore and Beach Preservation Association) conference in February.

We've also been doing a number of county outreach meetings that are sort of pilot meetings. Because we still have quite a bit of specifics to nail down with regard to minimization and mitigation, we wanted to get some of the counties' input while we're in this process. We selected six counties of varying size, location, and resources. We've met with four of those counties so far – Indian River, Palm Beach, Sarasota, and Volusia. Some of these counties already have existing HCPs, so they're familiar with the process. We showed them what we're looking at for minimization measures and reviewed what we're planning for mitigation measures to see what their thoughts were and if they thought it was something that could be implemented in their county. We got some really good feedback; they were all on board with our proposed mitigation measures. The biggest concerns were funding and staff availability. A lot of the counties already have these types of plans on their agenda, that they're either working toward on some level but didn't have enough resources, or they have it on their wish list of things to do. Franklin and Escambia are the two counties we have left to meet with.

So that covers the chapter and meeting updates. Now I'll turn it over to Jimmy and Coastal Tech for a review of the Gantt chart.

JS Jennifer, you covered most of what we've been up to, but the Gantt chart will give you a little more perspective on where we are in terms of the schedule and where we thought we would be at this point. Under calendar year 2014, the blue line indicates where we are now. How you can tell if we're ahead or behind schedule is if where the blue line intersects the black line corresponds to the percentage that you see there, then we're on schedule. We're done with the first five tasks here, and have been for some time. Line 35, which is 'estimate impacts,' we have recently finished up, and Mike will be presenting on that a little bit later. So we're pretty close to on schedule for that. And that corresponds with line 41 – 'develop HCP mapping support – however, that task also includes the mapping support that Mike's working on for minimization and mitigation. In terms of minimization – line 101 – that's where EAI has been pushing the ball forward a lot since we met in June. There is still some work to be done, as Jennifer alluded to, in terms of getting some additional FWC comments on the BMPs.

GA We had talked about a BMP for armoring. Has that moved forward at all? Is that being discussed?

JS Yes, it is being discussed, and we have developed one that looks at what factors contribute to putting an armoring structure as close to the upland structure that you're protecting are. But

it's a rather short BMP. It looks at the different sorts of lateral mechanisms – whether you use a tie-back or a soil anchor – and what type of foundation the structure is you're protecting to determine how close you can get to that structure. The other activities associated with constructing the armoring are covered by other BMPs.

- BE Conceptually, the way that we envisioned the BMPs is they're not merely guidelines; they're more of requirements. Now we've talked about the opportunity for anyone to come in who doesn't want to do what's required in the BMPs to come into DEP and propose alternative measures. That seawall BMP doesn't really fit in that category, because it's so site specific that virtually everybody's going to have to come into DEP anyway. So the BMPs basically like if you're going to come in and do beach raking or build a dune crossover, you follow these procedures. If you can't do that, you've got to come in and propose some alternative measure that gets more scrutiny by DEP. So that's one of the things that we're against with the seawall BMP.
- GA It seems like one of the things we talked about last time is that the BMP would alleviate some of the back and forth between DEP and FWC on seawall issues. Does it accomplish that at all? Or is that in the discussion?
- BE We're still trying to narrow down that list or the criteria that requires continued consultation between DEP and FWC on permitting issues. We can fashion some guidelines for armoring, but I don't think that they fit into the framework of the BMPs. Again, this is something that's been evolving; we're going to continue to explore it.
- KF It seems to me that there are activities happening in two different places. We've met with the Fish and Wildlife Service and their sea turtle coordinators who've been tasked with coming up with some kind of description of armoring so that our two agencies can be closer aligned on what constitutes take. Robbin, doesn't sound like whoever is working on the BMPs here should be plugged into that effort as well?
- RT Certainly those two efforts need to be coordinated, because the whole perspective is identifying the take aspect – at what location is it actually causing take. So we definitely need to coordinate. But as you know, Kipp, it is very site specific.
- BM Bob, when you said BMPs, that you consider those to be requirements, they're requirements to qualify for an expedited permitting process. They're not requirements for complying with BMPs that we lay out for all projects. I think that's an important distinction. And I also have a general comment on BMPs for seawalls – I don't ever see that happening. It's such a site specific review, and I don't think FWC and the Service really want to acknowledge that there's a best management practice for seawalls. It's such a last resort item. It seems like there are so many things that have to be thought through before you draw that line in the sand that I think it's going to be very hard to develop a BMP that could be termed as global.
- JW Are there some elements, Gary, that you thought would be included?
- GA I agree that trying to come up with a BMP that's global may be impossible, but over years, there have been people that submit applications for seawalls that allow them to have 150 ft backyard, which is clearly not allowed. So why not have some kind of BMP that reduces the effort that

FWC has to put in to reducing that backyard? It's those elements that I would think would be advantageous for DEP, FWC and the applicants. There's nothing up front that says to an applicant that you have to be as close as reasonably possible, or whatever you want to put in there. We've seen these applications over the years that are clearly not going to fly, and if they're not going to fly, then why submit them. It seems like a BMP at some level would prevent that up front.

DI Our CCCL program has BMPs that are online offered to every applicant, every county that tries to do an emergency declaration for erosion, and they say 'as close as practicable to structure' and they give a general guideline of 20 ft from the structure. Now, these are not mandates or requirements, they're recommendations, but we do have BMPs out there. So applicants come in and know they can't get 60 ft of yard, but that doesn't stop them from applying for 60 ft of yard. We probably have half a dozen applications in right now from St. Johns County where people are trying to protect their dune system, not their house. And it has been a year's worth of effort to try and reeducate them and get them to understand that our rules are not set up to protect their dunes. Rather, they're set up to protect their structure as a last resort. It doesn't stop people from pushing the envelope, though. So, I just wanted to clarify that we do have BMPs out there.

JW Is there anything we could put in there that would help you get off that merry-go-round?

DI Well, they're very site specific, and that's why we only have BMPs. You have some structures where you have a subterranean footer that comes out even more seaward than the wall. So you go out there and you look at where a proposed structure is placed, and it's relating back to where the subterranean footer is, as opposed to where the foundation wall is. That's just one example of why it can't be a blanket type of best management.

BM That half page armoring BMP that you've worked up, does that consider the BMPs that Danielle just referred to?

JS I don't know. What we did was we looked at critical factors in getting an armoring structure as close as possible to the building. It is largely an engineering-focused BMP, and I haven't compared it with what's on the DEP website.

BM Jennifer referred earlier to meetings you had on the BMPs, and I'm assuming this will all come out and be coordinated with these ongoing discussions with staff and the BMPs that you have in place and how well they're working versus the ones that are being proposed by the Working Group.

JS I think what would make sense is to bring what we've worked up, along with what DEP currently has, to you to review after we've coordinated with what Brian was speaking about trying to determine take from the armoring structures to make sure we've covered that.

DI The timing of when the Service determines take is occurring is important with armoring structures because when DEP reviews an application, we review it based on the site conditions at the time of application. Those site conditions, being in the coastal system, are not static. So, if at the time of permit issuance the structure location is sited such that there would not be considered to have been take, if somewhere down the line the site conditions change such that

now there would be a take, DEP has no additional point of entry to go in, unless there's been a modification request that's come in. So when we're looking at these permit applications we're assessing site conditions at that point in time, and should they change down the line it's difficult to hold the permittee or the permitting agency responsible once that permit has been issued from us. So the timing of take, and I stand behind my staff in saying that the permits that have been issued have not caused take. If they had, we would not have issued them, because we're not allowed to by statute. At that point in time there is no take when we issue the permit. What happens from when the permit is issued and when that structure is constructed is an act of god and mostly out of our hands. So the timing of when take is assessed is important in this discussion.

GA I don't necessarily agree with all that, but that goes to the whole issue of why we're doing this HCP, because that gets rid of that discussion because you're covered. It's not that DEP causes take; it's that state law allows things to occur that cause take. It doesn't matter who's responsible for it. The fact is that take occurs and the HCP is designed to alleviate the liability for what is occurring. That was one of the motivations behind Mike Sole pushing for an HCP eight or ten years ago.

#### **FUNDING UPDATE AND IMPLEMENTATION**

JM I sent out with the agenda a portion of the February minutes. David Dell was on the phone for that meeting, and there was discussion about the possibility of a phased approach, which has been brought up throughout the year. There was some talk about holding off until after the election, which has now passed, so we wanted to bring that up for discussion again. We also have some time on the agenda to talk about a timeline. We do have the 2015 legislative session coming up and we don't have any plans to have recommendations or anything coming up at that point, but we do need to start planning for the 2016 session. So we just wanted to make sure we're all on the same page as far as that goes.

KF This may not be a lengthy discussion, but I wanted to be sure we brought it up. But before we do that, I see we skipped over the funding update on the agenda. Is there a funding update that we need to cover?

JM Our funding update was that we did receive funding for 2015. We're in the process now of trying to prepare the grant for what we're planning on being our final year, which is 2016.

GA Before we move away from the Gantt chart, where is actual submittal of the plan in that?

JS It's within line 136.

GA So submittal would be at the end of 2015?

JM Mid-2016

JG Are you counting on a 4-5 year window once the plan is submitted for approval?

JM Optimistically, 2-3 years, but we really don't know how long it will take.

- GA I would say 4-5 years is probably more realistic. So if plan submittal is 2016...
- JS We actually have that charted out as early 2017 for submittal. At the end of 2016 we expect to have the draft plan completed and start to have upper management folks review it. Ultimate submittal would be in the mid-2017.
- KF I think submittal is the single most important event that you might want to have something on there that says that's the target and we can't necessarily control what happens after that, because for this group, that's the goal.
- GA But we should set a goal. We could set a goal of the end of 2016. This is the first time I've heard about a goal of 2017, and it's somewhat random.
- JS Well, it's based on us completing the draft plan at the end of 2015, and then a few series of steps that we thought would be necessary, including review by the DEP Secretary and any revision requests that come out of that review. And then final approval by DEP Secretary and then drafting the final incidental take permit application. So it's not completely random; there are a series of steps that get us to that date, as well as some guesses as to how long that might take.
- GA So it could be later or it could be sooner.
- JS Correct
- GA The big unknown is the Legislature. So are we assuming here – and I hope we are – that we will submit the application and HCP pending complete legislative approval? At some point we have to make that decision, because it could take years to do the legislative thing and we haven't yet decided if we're going to submit without waiting on that piece.
- BE Gary, as I've mentioned on numerous occasions, there's going to be part of the implementation chapter that we're working on, it will include schedules. I certainly think the Service understands that those things aren't instantaneous and may take some time to get in place. So we can schedule it out, and I think that's why Kipp wanted to initiate this discussion this morning to see how best to do that to make sure that everyone's still on board with including all 19 species, some of which are not currently listed, or phasing parts of the plan to address things first that DEP has the authority for and then phasing in those others later as statutory approvals come online.
- KF I think one of the things that we wanted to talk about that relates to this is when we finally submit, we all recognize that it can be a long process to get an HCP actually approved. It may be a while to get all the legislative changes in place. Both of these things are hard to predict. I think I'm hearing that you could submit with a number of things yet to be done that are critical to the HCP working, one of which is legislative changes. Certainly that can be done; maybe it should be done, but it strikes me as one more thing that could slow down the approval process at the Service level.
- JW We've had this conversation before, and it was usually in the context of cart before the horse or horse then cart. You know, do we go ahead and submit and does the Service trust and approve

the HCP and then perhaps get left out in the cold if the Legislature doesn't approve the HCP. Or does the Legislature need to go ahead and make those statutory changes not knowing whether the Service is going to give the ITP. And the last few conversations we've had on this, we've come to this hybrid cross where we recognize it's going to take the Service quite a bit of time to review it, and at that point we would be able to pursue those statutory changes. And there's a couple reasons for doing it that way. One is the Legislature will not have certainty of what the HCP will include until the Secretary has approved it. Until then, there's a lot of moving parts and that's a very awkward thing to take to the Legislature and say, we're not quite sure what this is going to look like, but you need to trust us. They don't like that, understandably. So waiting until we've got the plan ready gives them some certainty. The other thing is by going forward and pursuing those statutory changes once it's been submitted, the effort is also a demonstration of good faith to the Service. You know we said we were going to do this, and we're going it. And I think it creates that sense of urgency as well as partnership with both the Legislature and the Service to get us to where we need to go. I know that sounds awkward, and I'm sure it will be incredibly awkward as we go through that process, but the fact that the Service review takes some time, it gives us a couple sessions to get the changes we need. And if we don't get those statutory changes, perhaps the Service will say, we can only authorize this portion of the HCP because the statutory structure isn't there, which I would say would be a tremendous disappointment given all the effort that's gone into this.

- RM I would have to agree with Julie that the Legislature doesn't handle uncertainty well. And depending on whether this is submitted as part of an FWC legislative package or a DEP legislative package comes into play a little bit, too. If you're doing this as standalone legislation it only sort of shines the spotlight on the issue a little bit more. And if you're dealing with a five, six, seven year outlier in terms of actually getting approval from the Service, personally I wouldn't rush to the legislature because, again, if things are up in the air you might get that denial two or three sessions in a row, and then that weight becomes so much heavier.
- JW I think we should know what those statutory changes need to be, and we should be able to understand that at the time we submit the application because then the Service will have the roadmap for our intentions.
- BP As Jimmy indicated, the plan approval and implementation, if you look at the Gantt chart it shows that starting mid-2016 and that the plan would be formally submitted to the Service sometime in early 2017. The reason for that was to allow time for DEP and the Secretary to review and approve it. So you all have to come to an agreement to say, alright this is going to be our official document that we are going to submit to the Service. At that point, mid-2016, the Work Group is going to be to the point where we're saying, okay DEP and FWC administrators, we're done with it. We feel like we've gotten it to the point where it's time for you guys to look at it and decide if you can approve this. At that same exact time, that same exact document will come to the Service as a draft, and we will be reviewing it straight up to the regional office and doing the same sort of review simultaneously. And we'll have comments for the Work Group and DEP of any changes we see that are needed in order for that HCP to meet our issuance criteria. So the point at which the HCP is officially submitted, it would have been sort of rubber stamped that we're saying that it meets issuance criteria. We typically don't really accept an HCP that we haven't already looked at and feel like this is something that we would be able to issue a permit on.

- DI Then what takes the four to five years?
- DD This is David Dell, I just dialed in a minute ago. So what happens is the state submits an application to the field office. The field office determines that it's statutorily complete, and then they forward it here. Then I look at it and start it on the legal review at the solicitor's office, and that unfortunately can take some time. However, we have a new emphasis from the regional director that we need to turn around those solicitor reviews more quickly. So given the profile of this I think we would be able to get some priority on this from our regional director pretty readily. But that, within reason, could take about three months or so to get it back from the solicitors. We need a solicitor surname on the HCP and a solicitor initialing on the public notice before I can submit it to our headquarters for their clearance, and we're only talking a couple of weeks at that point. And then we would be on a 60 day public comment period, and then there would be a period of the field office wrapping up the Biological Opinion and me working with the field office to complete the findings and get everything approved by signature here. So given the size of this project and the things that mechanically have to happen it should be within a year or so. But if you want an estimate from me, I'd say 18-24 months.
- BP David, are you're including NEPA evaluation in that?
- DD That's all part of that 60 day public comment period.
- AB David, you may have missed this earlier, but when the completed "plan" is submitted to the higher level administrative staff at DEP and FWC, we'd also be routing that draft through the Service. I'm hoping that we can get some early solicitor review, because if there are fatal flaws I don't think that we would necessarily want those fatal flaws going to higher levels of DEP and FWC for review. So I think that when we get this all together, if there are areas where we think we need early solicitor review, let's go ahead and get those chapters in early. This whole process of developing the HCP, going through these early revisions is typically that really lengthy process. Once you've got that plan that meets permit issuance criteria, the elements are all the NEPA timeline, the writing of the Biological Opinion, and that part is the relatively quick part of the HCP process. It's the crafting of the plan and resolving all these mitigation and implementation issues that's the really lengthy part.
- TO It appears to me that a lot of money and time has been put into this; DEP and FWC have invested a lot in this. It seems to me that the Service, it's important to them, there should be updates to the people in Atlanta. And if Vero and the other field offices here are on board, that should go a long way.
- DD I agree with that. And if the question is about early review of elements of the HCP, then yes we're certainly willing to do that and I'm certainly willing to make a priority of that with the solicitor review if you feel it's necessary.
- BP To come back to the point I was trying to make in regards to the legislative revisions that need to be made, Julie you said it exactly right, we don't want to send something to the Legislature that is uncertain. They need to know exactly what the plan is going to say before we ask them to make the rule changes. So the point at which the HCP is officially submitted, the plan should be pretty well defined and be what is going to be finally approved to where if we're looking at a two year process to actually get the ITP, we would have a product that we could go to the

Legislature and say, this is pretty much what it's going to be. So those two processes could run concurrently, and in a perfect world the legislative changes would be made and we're ready to issue the ITP all around the same time.

AB Also, we're opening up for public comment. So if there may be some comments that we feel need to be addressed, but I can't imagine that would affect any legislative changes that would need to be made. Also, there was a question earlier about would the Service approve the HCP. We need the assurances that it can be implemented, and I could see us saying that this is a valid HCP when you show us that the legislative changes have happened. The take isn't valid unless all of your implementation can be assured.

DI Based on this discussion it sounds like the earliest we'd be bringing something to the Legislature would be 2017.

KF Hold that thought, I think there's still discussion on that.

DI And the other comment I wanted to make is based on the discussion earlier regarding the phased approach. We were hoping that we could possibly build that into the implementation portion of the HCP so that if we got to the point where the HCP was ready to be approved by FWS, but the Legislature had not yet expanded DEPs authority in the CCCL program to cover all the listed species that the plan covers, we would at least be able to go forward with the turtles right away, and then once the Legislature approves the authority for the other species, that would be the trigger for the rest of the take coverage. So that's tying it back to that previous discussion. In my opinion, it would be a shame to go through all of these years of effort and money and commitment and submit a plan that the Service could approve, but you can't implement even a portion of if the Legislature's dragging its feet.

BM I just want to comment that including the portion of minutes from the February meeting was very helpful. When I reviewed that, there's no doubt in my mind that things need to run concurrently. If not, by the time we go through getting the approval for the HCP and the Legislative changes, the data will be outdated by the time it's implemented. So by having the application filed, there's this sense of urgency there and tangibility for the Legislature to say, this is real.

But one thing Danielle brought up, and I remember reading this, is there's a concern about fragmenting this and breaking it up. There's a lot of emotion out there all the time for turtles, maybe not so much for birds and there's been a lot of work done on the birds. You mentioned this last time that a lot of this may get lost and you may lose that sense of urgency if you break it up.

BP The other thing to consider is that to be able to say that you could implement the part of the HCP that's related to sea turtles and not the other things, well the activities that we're talking about have the potential to impact multiple species groups. So if one activity is causing take of all three species groups at one time, then it's hard for the Service to say, okay you can have take for the sea turtles but not for the other things.

GA I think this is really good; we've heard some really positive things here. I think the Service is going to prioritize this and that's extremely important, because regardless of what the Service

may want to admit to, sometimes HCPs just sit on desks for a long time. So prioritizing this HCP goes a long way to moving it forward once it hits the Service. I agree with everything that Brian and Danielle are saying. It is possible though that the legislative fixes could be fairly simple and straightforward and targeted. We haven't gotten to that stage yet where the attorneys are working to do that. If you go back to the December minutes, that's when Wes Gregory was here and he was expressing that we could do that. So it is very conceivable that all this will happen at the same time and we won't be dragging turtles along waiting for everything else to happen.

Another comment I'd like to make is the submittal date of mid-2017 does not allow for legislative work in 2017, so the submittal deadline needs to be moved to the end of 2016 or beginning of 2017. And I think that should actually be a recommendation from the Steering Committee that submittal be no later than the end of 2016, so we can go to the Legislature in 2017. So I would like to discuss a recommendation that we move to the end of 2016 for submittal so we can make that happen.

KF Let's hold that discussion for a moment; we have a couple folks in the queue that have comments.

JW As Brett mentioned before, I do not support carving off species, because I think the birds and mice will get lost in the shuffle. And at the same time I think parsing it is going to open up the whole HCP to legislators asking, well can we go ahead and modify this part too while we're at it. I think it will start to destabilize the whole HCP, so we need to be clear when we take it to the Legislature that this has been a very long and inclusive process and this is the final product and DEP feels strongly that these are the statutory changes that need to be made so that they have the authority to implement this and they are doing so in part under the recommendation of the state agency that has constitutional authority over wildlife. The Fish and Wildlife Commission has assured them that these are important things to do for these species. So I really truly believe that the Legislature admires what the agencies do. They recognize that you guys have substantial subject matter expertise, and with both of your agencies standing shoulder to shoulder and advising them that these are the common sense statutory changes that need to be made to protect the resources and to protect applicants in the state, I think that will make the most compelling case for them.

BE Two issues came to mind during this discussion. The first one has to do with legislative changes, and I just want to remind everyone that in past discussions we basically condensed down what those changes are. They fall into two basic categories. One is the authority for DEP to implement measures to protect species other than sea turtles, and the other had to do with the ability to assess mitigation fees, because that's going to drive the funding for the HCP implementation. So even if you just wanted to look at those protective measures for sea turtles and phase those in, there still would be need to get that one statutory change that would give DEP the ability to assess those mitigation fees to fund the program.

The other issue that I thought about deals with process and that whole NEPA aspect. One of the key elements for that is the preparation of either the Environmental Assessment or Environmental Impact Statement. And I'm not sure if that's something DEP is responsible for drafting or if the Service is going to do it. My experience has been typically the applicant does that just to expedite the process, but that's another piece that's going to take a bit of time.

- KF That provides a good segue to what I was going to add to the discussion. We're having a discussion on legislative changes, and I know as a group you've hit on this previously in other meetings, but I'm not entirely clear that when we say those words that every Steering Committee member and every Work Group members really knows the full scope of what that might look like. And my experience has been sometimes you think you're making a little statutory changes but then you cross reference and find out that you have to change this, that and the other thing. So I thought what we might want to think about today is how does this group work towards really coalescing on what the statutory changes are, the technical aspect of how you get there, when do we initiate that, all the way down to striking words and underlining. It really helps often in this if you say, here are the proposals, and we've sort of hit around that. And the reason I think it would be time for that is because if we want to go to the Legislature in 2017, then we need to have that proposal a full year in advance, at least at FWC. I mean, we have a whole process of floating it a full year and going to committees and all that. Right now we're well into working on our legislative issues for 2016. So in my opinion it's not too early for the HCP folks to come to some agreement on what these should look like, because that may take some time before our respective processes start. And whether it's DEP or FWC leading this, we both have processes that these will need to go through. When does the Steering Committee get to look at words on paper that are proposed statutory changes? And that type of discussion needs to occur in the Sunshine as a team. So that's why I was trying to figure out who does what next on that. So I'll just throw that out there for discussion.
- JW I think Bob highlighted the two elements that have risen to the top previously. I don't know how you feel about it, Danielle, but from my perspective I would be looking for guidance from DEP about what you all would need in order to feel comfortable and confident that you could implement the HCP. I would be comfortable with at some point in the future DEP bringing something to the group showing where their staff have identified changes.
- DI Without a doubt, and I've seen strikethrough and underlined language already that our respective attorneys have been working on in draft format. The information that will be in the minimization and mitigation measures will help inform how extensive the mitigation language will be. So while I agree it's never too early to start looking at legislative language, I really think we need to have a better idea of the mitigation chapter and the implementation chapter to know whether we can just do these two changes or if we have to go further, because there are county requirements that are being included as part of the HCP. So there may be statutory changes that are needed beyond just DEPs statutes.
- GC I agree with you, we really need to fully understand the minimization and mitigation measures because a question that comes to my mind is the statute, I believe, limits us to construction only. Do we need to have clear authority to have an operational phase to implement mitigation? Because I think that's been lacking in our review of the statutory changes needed.
- RM Sometimes when you're dealing with the Legislature, moving a comma can be like climbing a mountain, so I think that preparation is really key. When you're talking about expanding the protection of the species it seems much easier to accomplish than when you start getting into the mitigation and take matters. One of the good things about the Legislature is that they've already decided who's going to be the Speaker in 2017. So that preparation for your legislative fix really should be done through Jackie at FWC or Pierce at DEP really a year in advance. You can bring those suggested changes once they're agreed upon by the Steering Committee and

the Work Group a session in advance so that people know that they're coming. And that way you have the behind the door conversations and that leads to less of a chance of that blowing up in your face publicly.

DI Based on the timetable a couple of meetings ago, we had lined up for this upcoming session a possible education opportunity for legislative staff and have even floated the idea of there being a legislative package that could be put together to start that educational process. I think before you go in there with proposed changes you really need to do an educational effort.

RM And for whatever chapter you're opening up, there are some real unintended consequences out there and they do need to be vetted completely before it's taken to the Legislature. The last thing you want is to go back a year later to fix a mistake.

KF It's not abundantly clear to me what the absolute tie in is with the legislative change that expands species authority to the HCP. So if there was a legislative proposal to change the statute that currently deals with only sea turtles, why does that need to be timed clearly with the HCP. Perhaps that would be a fix to a legislation and actually recognize the coastal system as the whole system now, without the HCP. I could see someone running that legislation as an agency because it seems like the thing to do, but I'm not sure what the downside of that is.

JW We have supported that previously, but the agency hasn't had the appetite for it.

KF I kind of get that, and I think there has to be some downside, but I think that would be a good thing for the Steering Committee to understand because there is language in the current statutes that says the Legislature recognizes that beaches are important to birds and other wildlife. So there are parts in there that recognize it as a complex system but not where it needs to be specifically when you get down to your enabling. And maybe that's part of that educational process. Maybe as legislators start to talk through general things part of it is, you know everyone knows the beach is important to all kinds of things, not just sea turtles.

MF You could also say the same thing about the mitigation package part. There could be expansion of mitigation authority and you could run that up the flagpole also.

KF In the simplest way it's like, if there are some good things to do, and the Legislature could do some good things that enabled our programs to work better for the beaches, and whether it's one year or five years off for the HCP, if there's some good that can be done where we go in shoulder to shoulder and say this makes sense for Florida...

JW It might be a good show of faith to the Service. If the state could say to the Service that we have the intention to finish these statutory changes during the time that you are considering the plan and we have already made...

GA I think it's very worth discussing because the assumption is already here in this five year process that DEP is going to eventually support that change. And I would go beyond that and say there's a tacit approval at DEP to support that change already because of where we are. And we all know that change is necessary to implement the HCP. So I think this is a very positive discussion; we've never really gone down this route. Does the legislative packet have to be an all or nothing thing all at one time? If there are certain things that absolutely have to occur that

we already know have to occur, why couldn't we move that forward now, as Julie says as good faith and a commitment to the entire process down the road. I think this is a great discussion to be having, and the Steering Committee directing the Work Group to make that happen would be advantageous. One thing we talked about earlier that never really happened was a legislative component to the Work Group. At some point, maybe three meetings ago, the Steering Committee discussed the fact that the Work Group needed a legal contingent, whether it was just FWC or DEP or combined, that was working in with the rest of the Work Group to address those legislative things. So it seems that we need to have that happen. We need to be really working on this issue if indeed we're going to try to go to the Legislature in 2017 with the whole packet. Anything that can happen beforehand would be great.

KF Well there's a lot to think about. Maybe this is a new nuance in the conversation so I think folks need to process that and think about that.

I'd like to go back to your earlier recommendation, which might involve a vote.

GA I was saying that it was inconsistent to say that we're going to submit in the middle of 2017 and we're also going to go to the Legislature in 2017. I think those things are inconsistent because we're not going to go to the Legislature in 2017 if we're going to submit in 2017. We can't go to the Legislature until we submit. So I would like to see the Steering Committee push the Work Group and the agencies to make an end of 2016 deadline for submittal.

JW So the motion is to set a new deadline for submittal.

GA Right. Move it from the middle of 2017 to the end of 2016.

DI I think we need to hear from the Work Group as to the feasibility of that because they're the ones who do the heavy lifting.

JM We planned on having the draft completed by the middle of 2016, and then leave the rest of 2016 for upper level management review. And we have a lot of outreach planned for next year because we're finalizing some of these chapters now. So there's a lot of outreach planned not only with the counties but within the agencies.

BM I think it's a really good idea because this is really the first time we've been advised of when we anticipate filing. So I think it's good to try to type it up, and if something happens over the next year, that can be reviewed. But I think it's important that we keep it on track and shoot for the end of 2016. I agree with Gary's comments and I think that's the wise thing to do.

GA I'll make a motion that the Gantt chart reflect that submittal will be at the end of 2016.

JW Second

KF All those in favor

All Aye

BM One other comment about what you suggested with regard to revisions to Chapter 161, I just want to make sure I understand. You were suggesting that that area of the statute hasn't really been updated to address other species that need to have protection. So you're suggesting that that language be added regardless of the development of the HCP. In other words, to say over the last twenty years through the implementation of the coastal regulatory program we've learned a great deal, and we know that there are species out there that can be affected by what is authorized under this program so it should be more officially considered in review, regardless of an HCP. Is that what you were thinking?

KF Well it was raised as a discussion and you captured it well. Separate from this HCP, in our jobs, we run into this kind of thing. So, yeah, in twenty years of dealing with that system and the wisdom of that particular statute we think it probably needs to be an update.

DI And a word on timing on a change such as that, since we're going into the 2015 session, those have already been vetted throughout the agency and brought up to the Secretary level and gotten support. So we're talking about changes that would be potentially recommended from the Division of Water up through DEPs chain for the 2016 session. Those legislative proposals get developed throughout the first half of the year, and then by the time we're briefing the Secretary on them it's summer. So I think it is worthwhile that it was raised as a discussion today so that I can bring that back to the Division as we're proposing our ideas for 2016 session and garner what type of support we've got for that to go forward. So this is a topic that could come back in future Steering Committee meetings so we have a sense of what support there is for this outside of an HCP.

JW The formal timeline on that would be to look at the 2016 session rather than 2015. I would just caveat that by saying all of us who have worked with the Legislature know that sometimes opportunities arise. You know sometimes a legislator gets excited about opening up a statute, and I think should that happen in 2016 I think it would be good to have discussed it and to know that if they are open to taking advantage of that opportunity. If you find a legislator who would be supportive of that and would be an advocate for that, it would be a shame to let that pass.

DI One thing to keep in mind that has happened in the past year is an issue in St. Johns County with armoring. This session coming up I'm on guard for armoring legislation that would make it easier to armor. So we're going to be a little bit on the defensive mode if that comes up, but there is a legislator out there who has been given a lot of attention by his constituents who want this armoring. And we're continually talking with his staff, educating them on why armoring is a last defense and why it is as restrictive as it is in terms of our requirements.

KF Just to make sure everyone is clear on this part, this is squarely one of the things that FWC and DEP work on all the time as it relates to the process, the permitting and the limitations of the statute. So while it has great relevance to the HCP and is a necessary part for the final HCP to go forward, it's not a, as it relates to that legislation in the works, in my opinion. I want to make that clear so if that comes up out of the blue, we will be engaged. And while it relates to this process, it's not suggested that it needs any vote from the Steering Committee today.

Are there other items as it relates to implementation that the Steering Committee wants to talk about?

- DI I'd like to find out if there is any new information that the Work Group can offer regarding the implementation chapter, adaptive management or mitigation measures.
- MF I'm going to talk a bunch about mitigation later on in the meeting.
- JM As far as adaptive management, we haven't gotten very far with that chapter. And implementation we have a framework for and Niki's going to talk more about it later today.
- JS For implementation we started working on the framework – who would be doing what. The funding and schedule need to be born from the framework. Niki will be talking about the framework in terms of roles and responsibilities, and then funding and schedule will be coming up later, hopefully at the next meeting.
- MF I have a question that came up a bit earlier. What in particular do we need to do to queue up the NEPA process or those other review processes that were just mentioned? Is something other than what we're doing anyway that needs to be done?
- AB I know at least for internal Service review of the HCP we need to have reviewers identified so that if a solicitor is available and interested we can have them review drafts early.
- DD I would hope that the NEPA is going to start running concurrently with the HCP. We'll certainly take an early review of it at any time. And by the time you would be submitting a signed and complete application we would need to have the EA or NEPA document in hand before we put it on public notice.
- AB Just so everyone knows, the NEPA document is the public disclosure of the significance of that action on the human environment. So as you all are aware, the HCP is the applicant's document and the EA is the Service's NEPA document for compliance with the National Environmental Policy Act. So it is the Service's document but it is not uncommon for the Service to contract it out because the Service is not very expeditious in their drafting of these documents, nor are they as experienced as consultants or our other federal partners who write them on a regular basis. I would advocate that that gets discussed between the Service and DEP and FWC to identify whether we want to hire a contractor or what we want to do to make that happen.
- BE That's one of the reasons I mentioned that before. I think that one of the things that we have done in developing our take estimate is go back and look at prior history of permitted activities in the state. One of the things Trish Adams wanted to do was make sure the EA or EIS captured what's happened in the interim between when those incidents were made and when we submit to the Service. So that's going to take a bit of work and it's not something the Work Group has contemplated. If it's going to run concurrent we haven't budgeted for that, so it's definitely a topic for discussion.
- AB And quite often it is developed concurrently, so there's no reason not to if we have the staff and funding.
- KF I'm confused whether this is an independent FWS process or a process that is somehow part of the development of the HCP. It's not clear to me what's being asked here.

- BE The EA is definitely a Service document. It's the responsibility of the applicant to prepare the HCP. NEPA documentation, the EA is a Service document. It reflects the Service's perspective on the action that the applicant is taking. So you kind of have to change hats a little bit, although it's been my experience that the applicant has actually developed that. But it is a Service document.
- AB And I would say that it's not necessarily the applicant but a consultant hired by the applicant. In some instances because of workload and other things it's a different consultant than the one working on the HCP.
- TO can we get funding for that from the Service?
- BP I have heard of it in the past.
- DD The only funding we have to assist you is the HCP planning assistance grant and that's strictly for HCP planning. The elements that would have to go into the NEPA document would have to be defined in terms of elements of the HCP.
- AB I don't know that this is a Work Group question so much as a question for the three agencies to discuss and decide how to handle it.
- KF Right. So I think some of us on the state side are looking puzzled. We've been through this really long process with lots of money and activity and I'm hearing that FWS has a process that needs to be done concurrently and I'm hearing if you want it done, someone else has to do it and someone else has to pay for it.
- AB So it is a Service document. It's the federal agency's to comply with NEPA. We can start that process on our side internally, but I'll say again that it is common practice that an applicant in their planning process for developing an HCP has identified that NEPA needs to take place and there are conversations that occur that say the best and most efficient way for this to happen is to hire a contractor to do this.
- KF So we have another HCP where the consultant is writing the EA for the panther. Is that an example of this?
- TO It is, but I believe that entity also put up a ton of money as their match.
- KF So as it relates to this process, everything is well thought out on what the deliverables are and what the HCP grant is paying for. It seems odd to be talking about another issue of payment, which is probably not even possible. So what I wrote down, Ashleigh, is we have a conversation every two weeks with Larry Williams and this just got put on the top of the list of things that Nick will talk to Larry Williams about.
- AB Okay.
- DD Let me follow up on what Ashleigh mentioned earlier. I think this is a conversation for the three agencies and not necessarily for this committee. And it's beginning to sound like the answer is

going to be that the Service is going to take this on, and that is our responsibility, but we're also going to have to rely on a lot of the data that's been generated from this HCP planning.

GA That sounds like a great commitment.

DD Well, I don't know. I don't commit Larry Williams.

BM The good news is you have two years.

KF Any more comments on that?

JM Ashleigh, how long of a process do you think it is for completing this?

AB Again, traditionally they're written simultaneously, so I think as you're resolving all these things in the HCP that will all feed in to the NEPA document. A waste of time would be to complete the HCP and then start the NEPA process. I think we have ample time to join in at this point and work on them together.

KF Is there anybody on the phone with comments or questions?

#### IMPLEMENTATION ROLES AND RESPONSIBILITIES

ND I'm going to just talk about the roles and responsibilities of the people who will be implementing this plan. So one of the dilemmas in this chapter is we wanted to provide sufficient detail so that the Service could determine if the plan could be effectively implemented, but we don't want to make it so rigid that there's no flexibility or maneuverability. This concept applies not only to this chapter, but also to the HCP as a whole. Bob provided me with an example that comes from the Volusia County HCP. It was explicitly written into their ITP that the sea turtles monitors have to use a certain color flagging tape to mark their nests. So if they went out and used a different color flagging tape, the County would have been in violation of their ITP. That's an extreme example, but it sort of demonstrates the pitfalls we're trying to avoid.

So basically the HCP is a blueprint or a cookbook. There's probably going to be a lot of turnover in the 25 year term, so we want to keep that in mind to provide sufficient clarity so that there's consistency going forward. So we need to describe what has to be done, who's responsible for each task, how much funding will be needed, if certain tasks can be done with existing staff or will there be new programs involved, will certain things need to be contracted out of house, and all of this will be addressed also in the economic analysis that Dave and Colleen are working on.

First we need to parse out the responsibilities among the different Departments in DEP. We have the Division of Water Resource Management (DWRM) which will have the primary responsibility of implementing the HCP and administering the ITP. The CCCL program is housed in this Division and they'll be the focal point for implementing avoidance and minimization measures as well as assessing mitigation fees. The Beaches and Field Services program is responsible for collecting the data needed to establish the CCCL jurisdictional boundaries, and they'll handle compliance and enforcement of CCCL regulations. The district offices will continue to permit low impact activities and ensure compliance with CCCL permit conditions. The Beaches, Mining and ERP Support (BMES) program will provide logistical support to the

CCCL program throughout the implementation of the HCP, such as through GIS support, resource data management and program administration. Also, the HCP coordinator will likely be staffed within this program. The Office of Technology and Information Services will assist the CCCL and BMES programs with developing an interactive web-based program to facilitate the CCCL permitting process, and also to develop new databases or modify existing databases to improve the tracking of permitted activities. The Office of General Counsel will address the legal questions that may arise regarding the intent of HCP language or the terms and conditions of the ITP. Lastly, the Bureau of Finance and Accounting will be responsible for managing the HCP mitigation trust fund and distributing the money collected under that to the entities having implementation responsibilities.

Of course, all these moving parts will fall largely on the HCP Coordinator. This person will be nominally in charge of implementing the HCP in conformance with ITP terms and conditions. To that end, he/she will be the primary liaison between the Service and DEP. They'll be responsible for coordinating all the activities of the various DEP offices and programs that have implementation responsibilities. They'll provide HCP training to staff within DEP, FWC and other non-agency personnel, and they'll have targeted programs for all these different audiences. They'll ensure the minimization and mitigation measures prescribed under the HCP are effectively implemented in accordance with established guidelines. They'll maintain records to comply with ITP reporting requirements. And they'll also serve as chairperson for a Technical Advisory Group (TAG) and also for an Intergovernmental Panel (IGP).

FWC has always been DEPs principal partner agency with respect to protected species issues affecting the CCCL program. This relationship won't change under the HCP but we do think it will shift a little bit. FWC will continue to provide technical guidance to the HCP Coordinator and to CCCL staff on wildlife issues. Construction phase monitoring is still going to be an important aspect of CCCL projects, and FWC will continue to accredit and provide technical guidance to the monitors. An effective program is already in place for sea turtles, but there isn't really a program for shorebirds. FWC will also be responsible for managing the data that's collected by the sea turtle and shorebird monitors and ensure that data is readily accessible to the HCP Coordinator and CCCL staff. Currently DEP consults with FWC on permitting decisions for the CCCL program. We expect that this need for consultation will decline under the HCP as many of the requirements typically recommended by FWC are going to be required in the BMPs. We're still in the process of determining when consultations will be needed. Finally, FWC will play a large role in assessing the effectiveness of the HCPs minimization and mitigation measures.

Conceptually, we've established that there will be two oversight groups that will provide support to the HCP Coordinator: a TAG, which provides technical support and an IGP, which provides policy level support. The TAG will consist of subject matter experts from the three agencies as well as non-agency entities, such as universities, non-profits or consulting firms. The exact composition of this group would be left up to the HCP Coordinator. We don't want to be too specific in this section, we just want to convey that a TAG will be there to support the HCP Coordinator. We've established that this group might meet every five years to assess the plan's performance, to consider monitoring data that's been collected since the last meeting. This group would recommend and prioritize any research to help fill gaps and recommend any changes to the minimization and mitigation strategies that would improve the plan's performance.

The IGP will consist of members from the three agencies. This group would be intended to provide policy level guidance to the Coordinator. And similar to the TAG, it would meet about every five years or potentially more often if needed. It would review the adequacy of recordkeeping, data collection and management. It would review recommendations of the TAG and initiate appropriate actions. It would also determine if administrative or formal changes to the HCP or ITP are needed. It could also initiate adaptive management if it's determined that the mitigation and minimization measures prescribed by the HCP are not meeting the plan's biological goals.

This section also describes the roles of USFWS, local governments and stakeholders. The Service will appoint an HCP Coordinator that will interface with DEPs Coordinator, and they will provide support for any incidental take issues. Local governments will obviously play an important key role, and Jennifer pointed out that there's some outreach planned for that. And the stakeholders will be important in helping assess how well the HCP program is working and how the CCCL permit requirements are impacting the regulated community. The HCP Coordinator will be responsible for facilitating stakeholder engagement and then channeling that information to the IGP to determine if changes to the HCP are needed.

So with that, I'll open the discussion to any comments or questions.

- KF In the role of FWC, it's not clear to me what our role is in calling take. Does that role change in light of the HCP?
- RT I think that's a big part of the exercise that Mike is going to talk about. This will be the first time that take is actually very clearly defined as to intersecting the different activities, so that would not be a role that we would take. It will have all been vetted and approved and the Service will issue incidental take. It's similar to what happens with beach nourishment now where we defer to the Service and they issue an incidental take permit.
- JW How would that work with state listed birds?
- RT I think we'd have a similar approach. Mike, do you want to jump in?
- MF I guess FWC will continue to be needed on the judgement call of whether some activity or something that's occurring is covered by the HCP and the definition of take and the method used. So there will be odd cases, for sure, over 25 years that can't be anticipated now, so it'll continue to have that role. But I think Robbin's right, most of the stuff that's going to be in the routine category that is covered by what we've analyzed and the data we've been able to collect gets off the plate. And then the things that are still there are big projects, unusual projects and things that basically can't be mapped on that big wide scale.
- JW The state may want to consider issuing a companion ITP. I think that's fair. Otherwise I think it's kind of a second bite of the apple for these species. The state is voluntarily including these state listed species in their federal HCP application, and so if FWC is comfortable with that, I think it would be appropriate to consider a companion ITP at the same time.
- KF For those who don't know, we're in the process of working on state imperiled species management plans that would include plans for all those state listed species. I'm going to have

to think about how that works, because that plan is a state document and the timing's a bit off because we're intending to get that done within the next year.

JW You may be in that posture, though, by the time we submit. And that may not even be the deadline. The deadline would be when the Feds approve it and they have federal immunity from take, it would be appropriate to match that with take for the other state listed species.

KF It's certainly something to think about.

BE I'm not sure I quite understand. Does the state issue ITPs?

KF Yes, we do issue ITPs and there's the potential for us to do that quite a bit more, depending on how this state imperiled species management plan is finally approved. Clearly, in our state imperiled species listing ruling you cannot incidentally take state listed species without conservation benefit. So you have to show that not only is the take neutralized, but there's also a conservation benefit. Because the plan is being developed and it's a big years-long process, I can't honestly say that we're issuing those permits now, but we're certainly moving towards that. The plan will also take the approach that if you have enough good best management practices, minimization or avoidance measures, many times you would not have to issue an ITP because the activity is done in such a way that we'll have concluded that it's consistent with the plan and take does not occur.

JW Well, regardless of how you handle it, I just think it would be good customer service to the applicant to know that they have met those requirements.

KF I agree.

BM If a project is way out there and, like Gary said earlier, is asking for more than it should be and operating outside the best management practices, is that the point when FWC would then be making a determination of take?

KF It could, but I think what Robbin and several folks have said is that once the HCP is done, the determination is sort of less important because mitigation would be required through a fee structure or something else. But I like your question because I'm thinking that no matter how great a plan is finally approved, there are going to be things that happen that aren't consistent with the plan or aren't in line with what we thought would happen. There's always going to be some odd things that come along and whose role is it to see that it's being done properly and that whether the take is authorized doesn't necessarily mean that the 150 foot backyard is a smart thing.

BM So whose role is it to determine if the applicant should have higher mitigation or higher assessment of penalty and fee so they can get what they want?

KF I'm not thinking that's why any of us are here.

BM No, I don't think so.

- AB I would anticipate that it would be actions that aren't covered under the HCP, and that would still go through the traditional process, which is why the conversation now, speaking of the legislative fix outside the HCP negotiates how take is being issued between DEP and FWC has validity outside of the HCP boundary. So there may be that person who has an action that's covered under the HCP but doesn't want to comply with any of the mitigation requirements or BMPs for whatever reason, and they need to go through the traditional process. And then you're stuck in the position you're in today if that legislative fix were strictly tied to the HCP.
- DI Well in a way we'd be looking to the Commission to make that take determination. So if a project does not comply with the BMPs and the approved HCP, then the applicant has that option, albeit more tedious, but they would have that option.
- AB And the HCP will set that bar for mitigation and what's expected.
- GA But that person wouldn't be able to offer extra mitigation to allow him/her to do what's outside the purview of the HCP. Mitigation is built into the HCP; it's not an individual applicant-driven mitigation process.
- JG Why couldn't it be?
- GA Because it's just not. Mitigation is part of the HCP in general.
- JG If they wanted to go outside of the whole thing...
- GA Well, they could do that if there was a mechanism to do that, but the HCP doesn't provide any mechanism for an individual to comply with the HCP by offering individual mitigation.
- RT So they would have to go through their own Section 10...
- GA Right.
- RT So the legislation allows DEP to issue a pending permit, although they do not get to construct.
- DI If there's a take determination, we cannot issue. So if an applicant chooses to go outside of the HCP and outside of the BMPs, and we coordinate with FWC and there's take, then there's no permit. But if there's no take, then it means they can construct their wall in a manner that doesn't cause take and they can get their permit.
- GA Highly unlikely.
- BM Remember we had a discussion about BMPs and not everyone is going to go the easiest route, but it doesn't mean their project is not something that can be permitted. So depending on how far away they get from the BMP there's probably going to be a take determination or there's not, and I'm wondering if that's when FWC would be involved in making that determination.
- KF It could be, but I think the more we talk about this there's some uncertainty in thinking through it collectively. Even if there's an armoring, following guidelines, there's take of habitat as well as turtles, for example. So there's some take of habitat, but my understanding is that's why we're

in this, so that can be allowed. Even if it's only 20 feet, it's still take, it's allowable take, it's in line, it's compensated, and you go forward. But, like Brett said earlier, if they say they want a 200 foot yard, there's still take. There's take on the first one, which I think is sort of encompassed in the HCP. The second one is also take, and it's still not clear to me with some of these legislative changes, would you not be allowed to permit that kind of take? It's tough because it's outside the HCP and I'm not sure it's described that way in statute. It's still not real clear to me what all the roles and responsibilities will be.

- DI Well the Department is still going to need to rely on one of the resource agencies, whether it's FWC or USFWS, to call take because we don't have that subject matter expertise. So it's sounding like the BMPs, particularly for armoring, since they can't account for every situation imaginable, we have to expect that we'll see applications where we'll have to determine if it fits the intent of the HCP such that take would be minimal and mitigatable under the HCP. And if so, we would need FWC or USFWS to say if that application would not cause take outside of what can be accommodated under the HCP. If that's the case, that would be a situation – under current statute, anyway – that would be denied, because it would be take that cannot be handled under the strategies in the HCP. You would think that the statutory changes would not necessarily weaken that standard, it would just add in the situation that applications, particularly for armoring, if they follow the intent of the HCP and the BMPs and their impacts are minimized and mitigated, then we could still issue a permit because it would be covered under the ITP. But we wouldn't want to weaken it such that if it wasn't minimized and mitigated per the HCP there would be take.
- BE I agree with what Danielle just said. I just caution that, I think the definition of take may vary depending on who's thinking of it. One of the reasons for the HCP and the ITP is to eliminate the uncertainty. So you want to make sure that if you issue a permit for someone and think it's outside the bounds of those measures that are prescribed in the HCP, then you'd want the Service's determination of whether or not take is occurring, because they're considering not only those direct impacts at the time that armoring structure goes in the ground, but also the indirect impacts that could occur later in time. Again, the BMPs are intended to implement the minimization measures. If someone can't follow the BMPs, that doesn't mean there won't be some minimization measures; those measures will just be incorporated into the CCCL permit. So you're going to have, just as you do now, conditions in there that are going to minimize impacts, and as long as the applicant follows those conditions then they should be covered under the HCP and the ITP.
- BM That was something Danielle brought up earlier about how there is a difference between how the Service declares take and how FWC declares take.
- KF I'm hoping that will be resolved throughout this process and that that won't be occurring in the future.
- DD Is it possible for someone to do a project in the CCCL legally without a permit from the state? You talk about someone working outside of the HCP, and they're only going to be outside of the HCP if they are outside of state jurisdiction. And like Bob said, the permit works through the BMP or permit conditions on a CCCL permit.
- JM Well it could be outside the Beaches HCP, but they'd still need to get an ITP.

- DD Yeah, someone would have to get their own ITP if they're not subject to the state regulations on the coast.
- DI It sounds like you're talking about geographical boundaries.
- DD Geographic and/or legal.
- GC He's probably referring to our jurisdictional limitations and exemptions under statute. There are many activities that can occur seaward of the CCCL where DEO either lacks jurisdiction or there's an exemption.
- DD We would issue this permit to the state agencies. So the state agency can take only for activities that they have jurisdiction over.
- MF Beach furniture is an example. If you're doing that which is not currently regulated under this program, then if it's determined you're causing take then you are responsible for getting an ITP for that.
- DD Of course, taking up your beach furniture would be a great BMP to have under this HCP, but we're not really authorizing take for something like that.
- BE We've been talking about addressing the beach furniture and some of those other issues through the mitigation. But the Department would not be responsible for any take that occurs for any activities that are done outside their jurisdiction which they have no management or regulatory responsibility for. The only ones that are kind of in that gray area for me are the ones that are specifically exempted under current statute or rule. Those are things that DEP could have authority for but decided they don't want authority for, and those things could cause take and I'm not really sure where those things fall. An example is monopole structures.
- GE I have a slightly different view than Bob on this issue. I would certainly view statutory limitations on DEPs jurisdiction are not under the purview of the agency. It's under the purview of the Legislature. However, where you have exemptions that are rule driven, certainly you have an argument there.
- JW I have a question for Niki. This is really helpful to me. At the same time I'm really visual, so I'd encourage in the chapter, if it's possible, to create an org chart for the way that these different groups interact. I think it would be helpful for the Legislature as well as for the public for outreach. The other question I had, I was mulling the five year term for those groups meeting. Five years is a long time. You'll see turnover, lose consistency. Also I expect there will be unforeseen developments in implementation that may require collection of data that was not anticipated at the start of the process in order to make those alterations or modifications, and if you wait five years to identify that, and you haven't even started collecting those data, you're not in a position to make those alterations. I think it would be better to, even it's a more modest meeting, meet on an annual basis so that you can identify those tweaks or additional informational needs so that you're prepared for the information you need to make course redirection on a five year scale. I don't know what thinking went into that five year determination, but it felt like a long time to me.

- BE The reason for that is this stuff is slow to develop, so as a lot of data accumulated you'll need several years of data before you can assess how effective the programs are. So we thought five years would be sufficient for the TAG group. The IGP may meet more often; I think we said every five years or more often as necessary. There are other ways of addressing the changed circumstances. You remember we have a whole chapter for changed and unforeseen circumstances. So if things come up in between those meetings, the IGP can address them as the data are available.
- JW But I think some of those data are going to need review by the technical side of it, not just the IGP. It's not just going to be process challenges, but it may be this is functioning biologically the way we thought, or the data we're collecting is not measuring the success or failure as we needed it to and we may need another parameter. I'm just saying we're not all-knowing, and maybe it's one of these things where they would start out meeting more frequently and as the HCP matures there could be greater time between meetings. But I think there's a role for more frequent technical oversight as well as that intergovernmental oversight.
- BE This is just the initial framework. This is perfect. This is the issue that the Steering Committee needs to give us feedback on.
- JM I think this all ties into the compliance monitoring and reporting chapter, which we're still working on as well.
- JW But it also gives the public entry into the process. So it's not just the internal process, but it's accessibility.
- MF There are some initial start-up programs here, so there could be a nominal category for that or a different schedule for the first five years, for instance, until things are up and running. The other thing is there is a need for a substantive deep review process that can be slower. That doesn't mean that it just shows up at one meeting, but every five years there needs to be a really deep review of this thing. And then the monitoring and compliance chapter has a while technical component to it, and we need to make sure we're measuring the right things and getting the results expected, which may or may not need full public review and scrutiny. It may be more technical and could be done at an annual experts meeting. So I think the original intent is that this is more for the bigger, public formal review to make sure we're on track and we hit the five year mark.
- BE On the public side of things, I don't think this was envisioned as a public forum. This is for the experts and the agencies to take our best view at how the program is working. We've talked about the stakeholders and outreach, so I think you're right Mike, there may be another mechanism where we get true public feedback outside of these groups.
- DI Mike I like your idea if we're setting out what the five year review needs to entail. You want to be doing an annual assessment as data becomes available, and that's where that compliance monitoring comes into play so that we've actually laid out what is the expectation of that five year review, and since the data's been analyzed year by year, you want to make the most of these five year meetings. So you're going to want to have all the problems identified going into the five year review meeting. And oftentimes those are revisions that will need to be vetted up through our agencies. So in order to make this a useful, thorough review with the opportunity

to make fixes, we need to be doing year by year bites of the apple that could potentially be done with a smaller more focused data as it becomes available each year.

KF I think Niki and Bob and others, I would encourage you to also think about future roles of how it works with consistency for the HCP. I've been involved in some long-term planning projects and you try to plan for everything and you finally have the plan, and then our roles switch to is this application, this rule, this issue, this whatever consistent with the plan. So don't underestimate that there will be frequent determinations by somebody on something that comes in the door on whether or not something is consistent, and some of those things are litigated. But just think of it in that way also, because it will be an issue and it will be something that we all kind of shift to.

JW As you're outlining the different roles I would put in there where the public has entry into it, because the applicants are going to want to be able to provide feedback on how it's working for them and want to see that it's achieving the results it's designed to. Similarly, members of the public that are concerned about impacts of those activities will want to see that the plan is functioning as it was intended.

## **ECONOMIC OVERVIEW**

DM So basically all program costs need to be identified and accounted for. That means if there is effort, commitment, tools, programs, these are the things we want to account for. How you account for them can be opened for discussion, but it needs to be recognized and those decisions need to be made. The second key element is that the eventual framework for the plan. How the take is offset relates to size, timing and the quality of the impacted habitat, and how those are addressed through various mitigation actions, those will affect the program costs.

Where there's a commitment being made – we talk about data, tools, monitoring, reporting, and compliance activities – any of that reflects a commitment of labor, expertise, equipment and there's a cost associated with that. One of the big ones is compliance monitoring. Who's going to be doing that, how is it going to be done, and what sort of effort is involved in that? We need to make the decision if these are costs that will be absorbed by the agencies or will it come from the mitigation fund.

Next are the cost considerations and the first one is a big one: will the program fees need to cover all the costs? That will go back to identifying what the actual costs will be. Also, what commitments will the agencies cover? Will they cover some or all of compliance or monitoring? These are typically costs that can get really big. We also need to decide if there are program limits. So in terms of a mitigation fund, are there certain limits of what you can spend? Can you carry negative program balances?

So as we've been working on this we've broken down different cost categories of mitigation actions. I've laid out some of the basic ones here: land acquisition, planning design and permitting, project implementation, operations and maintenance, monitoring, oversight and administration, and contingency. The idea is to have a standard framework for presenting the costs to the Steering Committee, agencies, and ultimately the public, and be able to identify if we've missed anything. It should also help the agencies when deciding what are we going to

cover and what are we going to pass off. So this is sort of how we're starting to look at the cost information we have and we plan to work more on it going forward to come up with a very clear, transparent cost summary over time.

These are some of the things that we imagine coming back to the Steering Committee or issues that we'll need to make decisions on. The first is commitment to a mitigation strategy, which is looking at a series of mitigation actions that need to be evaluated, and also the categories of offsetting mitigation actions. The next is helping access relevant in-state mitigation project data. We want to make sure the cost information we're using is both consistent with other scenarios and won't cause internal problems relating to other scenarios. And finally, defining relevant financial constraints for the program, whether it's timing, level of expenditures or showing a zero balance at the end of each year. There will probably be additional issues as we're going forward, but this is just to give you a quick idea of where this is all going.

- KF I'm trying to understand the cost related to the HCP as compared to the cost of the activities that the HCP relates to. Is it a cost analysis of the habitat conservation plan or is it a broader context of the cost of all these activities?
- DM We're not looking at the cost of the actions that cause the take. We're looking at the cost for implementing the HCP and the mitigation actions.
- DI In your cost categories, you've got planning design and permitting, and I'm not clear on if that relates to a project that's applying for a permit or the planning design and permitting for any mitigation strategies.
- DM The actions in the costing scope are the mitigation actions. Currently, we are not considering the cost for an applicant would occur in association with their actions.
- DI But I think if we have an idea – I think you said you have some mitigation projects envisioned – it would help me make sense of this presentation if I understood what those are.
- MF It's a little bit of the chicken and the egg.
- DI Because this makes me think of large-scale projects that might be able to be funded by lots of little individual permits that are paying mitigation fees to fund a larger project that wouldn't be offsetting one take but could be offsetting take across a region.
- DM I think it might be helpful to go back to these questions after Mike's presentation, because that might make some of this a little clearer.
- JS I was remembering from previous Steering Committee meetings that we had talked about an overall cost benefit analysis of the plan, and that is something that's still on the table but it's just further down the road.
- JW For public outreach and education that would be necessary to justify a big price tag. Another way to slice it, it seems like they're coming up with the cost of the mitigation which would traditionally be borne by the applicant, and then there's also the cost of administering the program and monitoring it which may or may not also be passed through. Regardless, the

Legislature is going to care about how is this going to affect the cost to the applicant and will there be a need for state appropriations for the agencies to bear the administration of it. I think it would also be advantageous of us to have an estimate of what it would cost if all of these individual applicants got their own take permit and the aggregated value of that, because I think that's going to be meaningful to decision makers.

BP That has proven a very strong method for garnering support from the regulated community. However, it might be hard to do that here because right now there is no mitigation.

JW But I think the assumption is that there would be, and this is an understanding that it would be one or the other. Is that something that the Service could help us with? I don't know if that's part of the scope of work that we have now. It would also be important for statutory changes, because whenever they do legislation they do an economic analysis. So having information that we can provide legislative staff when it comes time to do that would be greatly appreciated.

DI I think we need to be clear, though – and Brian you said it and I'm going to amplify it – all of these changes we're talking about are going to increase costs to applicants. So when we're talking about a cost benefit analysis, under this HCP and changed statutes, it will be more expensive for applicants to apply for a permit because they will have a cost that currently doesn't exist. It occurred to me that that may be something that's causing activities under the program that some applicant may want to do but not apply for it because there is no way to mitigate for it and no way to get a permit if you're causing take. But now we're putting a mechanism in place that will allow some take. It'll increase the cost because they'll have to mitigate, but think of the coastal property owners who will be excited about being able to write a check and get what they want now even if it does cause take. So I'm hoping we're not going to have an unintended consequence here on a statewide level now that we're putting a mechanism in place where we can allow for some amount of take, no matter how big the mitigation tag, where we're going to have landowners who are so excited to be able to do that project on their property that they haven't been able to do in years because of take issues.

JW And that's why mitigation really has to be meaningful. Otherwise, you're right.

RT There are some cost savings based on the certainty and the streamlining the process, so that should also be considered. There are some costs now to the applicant with all the back and forth and they have to get a consultant and all that. So there's definitely some savings there to be considered.

JM Also, as we've discussed, for counties that already have certain things in place that could be used as mitigation, there could be an opportunity for reduced mitigation fees because they're already doing things for mitigation that DEP doesn't have regulatory authority over. Predator control is an example.

DI In thinking about the cost in terms of two buckets: one being administrative costs of the HCP and the other being the mitigation, let's put aside the mitigation one because I don't have a good understanding of what the costs for implementing the HCP are going to be. At some point in this process, I hope we'll get an understanding of what those administrative costs are and whether DEP will need to do some kind of blanket contract with monitors, or are we talking about it being a volunteer network for data collection, and if so will that be led by FWC. Or are

we going to have to hire a bunch of data collection individuals to be out there in the field? Are we talking about survey data? Are we talking about remote sensing? What are we really talking about? And until we know that, we won't really know what the administrative costs are. And I think I'm a little confused why the data for compliance and monitoring, and essentially for HCP performance, would be only related to mitigation projects, because it seems like we'd have other parameters of performance and success that we'd be collecting data for that are needed regardless of the mitigation process. What is going to be the success criteria by which the performance of the HCP is going to be assessed?

AB I think it's a little bit of how you write up the HCP and how you set those standards. It would make sense to have a compliance monitor for the BMPs to make sure the applicant is actually complying with those BMPs. Who do you want that to be? Do you want a database for that information? If you set it up in a way that doesn't all of a sudden burden your staff in an unintended way, you do need to be meticulous about identifying those. So we need to put money aside to develop a new access database to house this data to make it easier on ourselves? Working with another HCP we identified that a certain department would be in charge of compliance for lighting and then we lost the funding for that department. So now we're out of compliance. So when you get into mitigation you need to think about how you'll interact with the counties so that you can try to avoid those things.

MF Just to comment on what Danielle said, that's the challenge in the way that this document has been structured and our work on it. We haven't done the compliance and monitoring chapter, therefore we haven't been thinking specifically about those issues. We are cataloging the different mitigation actions, which I'll show you in a minute, which is the starting point. And separately, who's doing what? We haven't brought those together, but presumably, that will be the bulk of that chapter. And without that chapter development we have nothing to give to Dave and team to cost out. So there is that kind of strategic dilemma there relative to the full cost accounting of the administrative side, but lagging for a reason.

## **MITIGATION**

### Lighting

MF I've got two things to talk to you about and I'll go through the first one relatively quickly. Over the summer we did work on finalizing take estimates and lighting simulation experiments. We split the beach mice out by subspecies, added the gopher tortoise to the list of things we're computing it on, and refined input data on beach cleaning and on Coastal Tech's survey work. And then along the way we discovered DEP shape files of the vegetation line that looks, where it was available, to be a better estimate of line of construction.

We have beach mice occurring in different places. We have incidental take strongly in the panhandle, where development is projected to occur in the future. We have an internal online system we're using to generate this stuff and adjust. So basically we have computations by decades and a list of species with beach mice broken out, and then list of activities that are simulated. So that went well. No major surprises. Same patterns as we saw before.

The lighting stuff we did was, I have to admit, overoptimistic. We worked with IRC and digitally recorded lighting at min sights and then reviewed biological response data for disorientation. And my conclusion were basically that lighting recording in the field does give consistent results. However, the problem is that available public and private data on biological response is either unavailable or needs to be cleaned up too much to use in the HCP. So that was disappointing. I've been dancing on the edge of what's research and what's best available data and this one ended up being that in the timeframe that we have it wasn't doable and I need to move on to mitigation.

GA So what does that mean in the bigger broader context of the HCP?

MF it doesn't mean we're ignoring lighting. It means we've punted lighting from incidental take into mitigation. So now we're using it as a factor for when and where we're mitigating. But we don't have the level of science data to estimate take from lighting.

BE we've tried to account for direct and indirect take, and we use indirect take as buffers. In the case of sea turtles that was the intent of getting this lighting data – to have a justified buffer limit. We were doubtful it would work but it was worth a try.

KF is it the biological data that are lacking?

MF yes or noisy.

KF So you can include lighting in your parameters and buffers and conclude that its visible on different areas of beach but can't quantify the take that s caused by that light or the take that would be avoided if that light wasn't there

MF That is correct.

KF So your work here in developing the HCP, that has some spillover implications to our current work.

RT I don't think so. I think it shows you can't use these current sets of data in any kind of comprehensive way to assess the impact of lighting.

MF And to present it back to the long term compliance monitoring and reporting chapter that have yet to be written, it means that there will have to be methods developed and demonstrated for exactly this kind of stuff over time, but in particular, the biological effectiveness question being once we decided what the measures of biological effectiveness are that we will be capturing them with an accurate and reliable recording system and Robbin has made the case for this for years, but some of the measures that are reflected are not necessarily the measures you want biologically so you actually need biological assays. We're not doing those, so the extent that we want to stall and refine that over time imply the research agenda in the compliance, applied research section, you're going to need to, for example, have a database that gathers that information and a set of protocols for the data they want collected. And it turns out that it is going to have to be different from that that is currently done for regulatory purposes, the scientific purpose I kind of different from the regulatory purpose, and because of that, it means

that the whole sampling design and experimental protocols, all of that basic design stuff, will have to be adjusted.

DM And what Robbin is referring to is the disorientation data?

MF Right, that in particular.

RT Right, and that doesn't mean that we have to include that question, the question does lighting impact sea turtles? The science is there. That's well established. So the fact that we couldn't achieve that particular goal with this investigation, doesn't really weigh on that.

MF Right. It's pass/fail. And sometimes it's just purely a scale question. With available resources, you can't tail this stuff, so that's the other thing. If we can simulate light and look at simulating bounced light, which is often not regulated, very well we could do it at the individual beach scale...it's just impractical to do it at the whole state. Are there any other questions of lighting?

This is a typical data sample from the beach...kind of makes the point that we can be collecting this data digitally and should we implement that in the monitoring process? You know, GPS exists and is really easy to use, digital photography exists, and provides evidence for the images reported for light to the astronomical light meter readings that are usually used in this.

JW What is the light data that we are looking at there?

MF So this is an HDR, high definition, high dynamic range, image of a shot from the beach, it shows the exact location, coordinates, and compass bearing, elevation, and horizontal angle. So it's basically one snap shot of what I did on the beaches which was to spin around on a tri-pod measuring light at multiple point on the beach.

JW So what's the measure of the light there? How would I compare that against something else?

MF I actually collected that with the astronomical light meters

BM You're measuring brightness? Lumens and frequency? Wavelength?

MF Not wavelength, just luminance with an astronomical light meter and so the color spectrum stuff you would have to get from this image should you choose to treat that, I was just dealing with the light intensity...can I measure the light intensity and predict it? But clearly the spectrum is important too. Once you have the full color image, you can filter it to get to the illuminance perceived by a turtle. That function is well described in the literature. The question was, do we get the luminance correct, does the luminance reflect the true color to what the light plastered on the light meter was getting? That was the initial question.

### Spatial Mitigation Planning

MF I'm going to spend about 15min or so on this. This is a two part presentation. I am going to queue it up and then pass it to Amy and then we'll return after break. So basically, we began this quarter with a very large list of potential mitigation measures that Bob put together and we kind of brainstormed with the species expert groups multiple times and we had dozens of

potential measures. We recently, at the Work Group and F2F meeting, reviewed some of that work with expert consultation at narrow this list down considerably and we didn't get as narrow as we were originally hoping. We were basically asking people for their top three and we ended up with the top three-ish with a set of general methods which are about 6, that you will see in a second. We tried to squeeze in into a little box and got it in to a medium sized box. So of general mitigation measure, here's my language, not necessarily the people suggesting this, but there about 6 that were general across the species. One was the notion of beach ambassadors. So extending existing volunteer initiatives to provide eyes on the beach and on-site public education. Research to provide critical background data. This was a big broad category, but...to design and conduct experiments, improve habitat mapping, minimization, mitigation practices, and other issues of direct applicability to adaptive management. Basically, how would we know that our mitigation measures are working the way we intended them to work. Training and public awareness came up repeatedly and is pretty general. I was hesitant to put it in this list because it may or may not be spatial, but it could be targeted spatially. Certainly beach mice would be targeted spatially. Beach cleaning came up repeatedly and got onto this list because of one specific measure, it was a top priority mentioned by all species expert groups. And so, we already have a number of measures in the HCP related to beach cleaning and so what would go into mitigation, we still have to wait until that line is drawn actually in the HCP, but whatever is beyond that line is...like stopping beach cleaning, minimizing, or targeting, or whatever is beyond what the HCP minimization gets decided, that's the mitigation side of the line and we could treat it there. Dune restoration, not surprisingly shows up here. It has benefits to multiple species and it was mentioned by all species groups. And then conservation easements and conservation land-banks, again mentioned, by different context, by all three species groups. So those are the set of kind of standard techniques.

The sea turtle discussion had by the Work Group and species experts basically, their top three included, not surprisingly, lighting management with a bunch of details thrown in, predator control, and beach furniture. And editorialized the detail on that, but maybe local ordinance or public engagement. So with beach furniture, obviously local government. I'll show more details of those in my examples. I'm not going to go into details now. Beach mouse mitigation measures included, top three, reintroductions, and this notion of micro-easements. You don't need a lot of territory for beach mice, sometimes you need the side yard, or a little space in front of the property. So that may or may not be the same as regular conservation easements. It might be a targeted, specific program, and hopefully easier to get up and running, with lots of little parcels. And then, obviously for these species, predator control has some specific details that might spill over from existing predator control. There are conventional methods of predator control for wide ranging omnivores and then there's targeted maybe pet owner education, voluntary indoor cat agreements, or something similar that has been included in other HCPs. Again, that was mentioned by this group. The shorebird and seabird folks, basically, the top three...stewardship and enforcement, this is one of those areas where we start to think about who is doing what, but there was support mentioned for the existing shorebird alliance program and similar volunteer oriented groups, and also potential for resources and local cooperation agreements to ensure rules enforcement. In the applied research domain, there was a specific aim here, which was already mentioned earlier today, which was extending the existing Florida shorebird database to extend it to non-breeding shorebirds, or to extend it geographic coverage to make it complete for the entire HCP plan area which it isn't quite yet. Somewhere in there, there is potential for applied research directly. And the habitat restoration or creation, the details here for these species are that there's some artificial habitat, migration

stuff that needs to happen. The idea of barrier island or barges or artificial habitats has come up...constructed habitat for lack of a better term.

I'm going to try and pass it to Amy after this slide, but the habitat quality index basically set up where we are going to plan for mitigation. The general approach is that we are going to try and quantify what we can and we are trying to be spatially explicit where it is useful. There are clearly some measure that don't work that way and we don't want to miss those. Far be it from me to say that public education isn't important, I just don't know how to put it on a map exactly. The overall idea we had on mitigation planning was that it was essentially a three ring approach. So we've got three drivers of successful mitigation planning and one is basically biological necessity. So Amy is going to talk to you about the habitat quality indices we've been developing to start to get a handle on that. The second is basically management quality indices or showing the current level of effort and where there is room for improvement. And I'll show you that after the break. And then we've already heard from the economic costs group, but I think that those three criteria are going to in some combination are going to drive the mitigation plan as a whole and to implement each of the measure, we need some estimate of its biological effectiveness, its practicability and its cost across the board. Basically, we're looking for the sweet spot in the middle there, that they are biologically effective, implementable, accost efficient. And so we are doing that on purpose, in parallel, between three sub-groups, but the idea is to drive that together.

AK So we're working on the biological factors of mitigation, but first I'm just going to describe to you, the general approach that we're taking to that, So we're working with our species experts, and have had several meeting to discuss mitigation, starting a couple years ago, although we're just now getting into the heart of the spatial planning portion. So the idea was to determine factors that were mappable, so in a lot of cases, this meant best available data we have or habitat quality. For each of those factors, we assigned a scale, and accounted for quality...I'll show you what I mean by that in just a minute. Each factor could be weighted by a level of importance. And again, we used the experts for that. And then the different factors, are combined to give us a spatial overlay that gives us and overall index. The graphic that I'm showing there is just an example what that would look like on one section of beaches in Pinellas County. The darkest color on the map would be the best quality and then a number of factors would account for the lowest quality.

JW Is that line not overlapping with the actual coastline?

AK It's a barrier island, barrier islands, you just can't see them here.

JW So all of this habitat is on the barrier islands.

AK Yes. So we have draft language/version from all of the species group, but we are still awaiting input from the expert. So we just got finished a couple weeks ago, but we were having complication with the experts via WebEx, but we will be using them to help refine some of these. So now, I'm just going to show for each species group, what the major factors are and the quality that we are discussing and how they might come into play in terms of their importance with their weight. So I mentioned that we are doing a spatial overlay where these factors get multiplied and sort of thrown together, but we also have the option of defining one specific rule, so if one factor overrides another we can always make that the highest quality

category. I would suggest that you don't pay a lot of attention to the details, the scores and so on. I really just wanted to hit the highlights for each group in terms of the factors we are considering. For beach mice, elevation is important for several reasons. First it can reflect the stability of the dune, but it can also be important in terms of the ability of beach mice to dig burrows. It's a pretty good overall habitat measure. And then we're also considering the measure related to habitat patch size. So large core areas are important. We got feedback from our experts, and Jeff was part of that discussion and we need to pay attention to those small contiguous parcels that can serve as stepping stones between large core patches. So we're working on a way to integrate those two things together, because both of those ideas are important for quality. And finally, we include habitat type and are able to designate between habitat that is occupied and habitat that is potential or the potential for reintroduction. So for beach mice, right now, we are considering those to be equally weighted.

For sea turtles, our primary measure of habitat quality is going to be driven by nest density that FWRI has pulled together and is providing for us. We considered other factors, but we heard from the folks at FWRI that let the nest density and location determine what habitat quality is rather than propose other measures. For example, we had originally proposed a measure related to elevation, but they felt that the density measure were stronger and more meaningful for what we're trying to get at. So we're considering those in a couple of different ways...regionally or geographically. So for example, for most of the state, we are going to use the maximum nest density for each species, which is loggerhead for most of the state, but in the SE, we are also going to consider the number of species and their relative nest density.

KF Is that density laid or success/hatched?

RT We don't know that.

KF So there could be lots of nest laid that weren't necessarily successful, but it would rank at a high quality even if they were washed out or something.

AK Yes it could.

RT It's set up as a 5 year average/quartile...but you're right, it doesn't consider production.

MF And that underlying carries over across all of our species/mapping problems.

GA Isn't it important to note though, that even though there are flaws in some of the analysis, that it is required for the HCP. I don't know this, I'm asking...so the flaws aren't necessarily a determining factor in acceptance of the HCP by FWS, what's most important is that you conduct some sort of analysis.

AK It still comes down to best available data and it is supported by the experts. So even though it's the best available, if it doesn't pass muster, I think if we have the support of the experts, what we're saying makes sense, that's basically what we're relying on.

AK The most complex mapping comes in with the shorebirds for various reasons. Obviously the birds move around so it's very dynamic and the data is pretty complex. The database from which this info comes from is very complicated, but the good news is that we have data being collected over quite a number of years. We have pretty good data for most of the nesting shorebirds. For non-breeding, it's a little bit different. So just as a reminder, for the non-breeding, we are considering all of the seven species that are included in the plan, so that's the 5 species that are breeding and the piping plover and red-knot. We do have relatively good occurrence data for piping plover and red knot now, so we're considering that data and including some analyses now for the density of those species and then we're relying on data from fairly old surveys from the early 90s, and again, this is a complication discussed with our FWC experts, Nancy Douglas in particular, thought that a lot of those sites are still relevant. And then we're also using distance measure from inlets and outfalls as being important as well as habitat mapping area. For the colonial nesters, you can see that the weighting measure are not equal. For many of the other species, the factors are equally weighted. Here colony size and site fidelity come out as the most important factors. We're also considering colony site density. That's not nest density, it's the number of colony sites you have in fairly close proximity. We're looking at the number of species in a colony. With the colonies with multiple species in the state, it is quite rare, so it is thought that they are very important. Again, we're looking at inlets and outflows, habitat area. And then we had a pretty strong recommendation that because black skimmers and least terns on the east coast are doing so poorly and there are so few sites left, that they should really rise to the top, even given all of the other factors, so they should be an override.

For solitary nesters, some of the measure are similar to the colonial nesters. We're using site fidelity, nest density, habitat area...and then we're also going to include...the first you see there, habitat type, really applies to the occupied habitat because we know that that's where the birds are and that's where we have good data, and the beaches adjacent to American oystercatcher roost sites, so those will go on the map. And again, we're considering the species overlap. So that's just an overview of some of the work that's been going on with the habitat quality mapping. Our goal is to take this back to the species experts along with the related mitigation work that Mike has talked about, and have it more put together by later this spring.

KF I think we might need to talk about this a bit, I see all of the criteria that we've got, but I'm not understanding the purpose of mapping habitat quality.

MF I may have jumped over the intro too quickly because I had some of that in there, but the short version is that we are using habitat quality to help drive mitigation targeting. So we're looking at that spatial mitigation targeting and that kind of use number one. And the second use is for mitigation fee assessment and I'll also show you some examples of that. So we're using this for both, but that could be done many different ways obviously.

DM You may have already mentioned this...So the plan is to define take as quality adjusted acres lost?

MF Yes, and I'll show exactly that (after the break). So effectively, we are taking, for incidental take, if you've got 100 acres, and now for mitigation planning purposes, for that 100 acres of quality for, so we're doing a simple touring and I'll show you the scoring, but effectively, we're saying that that's 40 units and we're going to purpose for the potential for mitigation banking, an

arithmetic based on that. But that's the first time you're seeing it and we'll go from there. We're basically we going to try out a mitigation scheme and then try is out, but that's the fist key in it. And the second use is more general...if you wanted to know where to target mitigation funds for colonial nesting species regardless of whether or how you assess impact fees, you can use it plainly from a spatial planning point of view. So those are independent outcomes of it.

JW So the statement that dune restoration is important for all three species, or all three groups...that's a strong statement for birds. So I'd just qualfy that by saying, when I'm looking at a site, I'm saying what conservation activities I could implement to make it better for birds, I've never once said create a dune. So I want to make sure that we're not asserting that.

MF Duly noted.

JW Because I hear people characterize that in a lot of times, it takes habitat, big time. So on the constructed habitat element for birds, keeping in mind that constructed habitat serves some features but not all. Easements...is there any discussion of what kinds of management or other needs would be associated with those easements, to make sure that we're not just capturing the cost associated with acquiring that habitat but also ensuring that it persists and remains viable for the species.

MF At this point, I don't think we've gotten to that level of detail.

BP Yeah, we haven't gotten to that point in the mitigation discussion yet.

MF It may be contrived, we have predator control as a separate item for instance, and in a way it is, in a way it isn't...if you're going to bother to buy a mitigation easement, you're going to want a set of management practices to go along with that would make it worth the money.

JW Exactly, the easement would have conditions.

MF So we're treating these things as independent measure, but actually from an implementation standpoint, they may not be strictly independent.

BP And that's a good thing to bring up and something that we'd want to share with Dave and Colleen, as far as an exact easement document so that they can incorporate those costs.

JW And then on the ranking stuff, has there been any thinking about that there would be regional options...and I bring this up because currently, with the ranking that you have there are going to be regions of the state, where there will be huge winners and are going to rank really high and then there will be huge losers that will rank really low, but biologically, it is important to maintain populations in each of those regions because of catastrophic events that can happen in certain areas, you don't want to put all of your eggs in one basket.

AK We have been talking about that, so on two levels I guess, the factors that you see are actually scored regionally themselves. So because take has been assessed locally, mitigation will as well.

MF I'll have a slide on the implementation aspect, there are multiple levels of localism that you could impose on mitigation, a bit of that we're assuming and want guidance on and if you drive

it really hard, you'll always mitigate next door to where the impact is. And that has benefits to the property owner because they get to see their mitigation funds being used, but biologically, that may not be ideal, because you could be spending money on a more expensive place when it could be more biologically effective elsewhere. There is an explicit pair of spatial targets and right now we're assuming only regional mitigation with the exception for beach mice. We're explicit about that in terms of the mitigation planning strategy at the regional level, not at the county level or other local level, at least not yet.

- JW So will there be ground-truthing with those cases with experts once you crank everything through. You've gotten your experts together here to look at the numbers and once you push everything through the model are you going to have them again look at the results and say if this makes sense.
- MF So the plan was to get you to review the concept of the mitigation, the planning pieces, get some guidance from you and tweak and then we'll have a next round of updates on the habitat quality indices and then late winter early spring, the process is to engage with those expert groups to say, well you told us that this is a 4 not a 5 and this is how we've used it and based on the results of the mitigation plan, do you still think it's a 4 not a 5. So we know that we'll have to cycle back on that. At this stage, we can't fully evaluate it, and we don't want to ask too many questions at once, but that plan is to have them review the implication of this back on the mitigation plan and the implication scenarios and bring that back to you at the next mtg. By then you'll have two round of expert review of these mitigation scenarios for your consideration.
- KF So you're going with where the species are nesting and letting that dictate the ranking. I assume that must be by region and does not compare a nest area in the south with one in the panhandle
- MF Correct
- KF Because it also doesn't speak to a depleted population. So it could be excellent habitat, but there aren't enough animals there to nesting, so you're not ranking it
- MF Right, The SE get off easy. But yeah, we're not doing heavy beach mouse stuff in the SE
- KF We're rating the habitat based on the presence of animals...what comes to mind is we could be highly rating an area that's a population sink, where actual reproduction is occurring whether it's birds, mice, or turtles, they're there, they may be there in numbers, so they'll get the high rating, which you said earlier, would drive the mitigation cost or it might drive the priority you select doing something with and it may or may not, biologically, be worth our time because it's a sink.
- MF This topic has been fairly well discussed by each of the groups and they're well aware of it
- JW Well hopefully when the experts look at the list we generate, that's going to come out too
- GA But it can't always come out...it can't come out with the turtle issue because of the density, there's no way to ferret that out

- AK And that's some of the most limited dataset
- JW If an area that's identified as a sink, that's where you're going to run into problem. You can run through this process, explain it, and then say that the next step was to identify the sinks we looked at that...that's all part of your thought process of explaining. It's all valid
- MF For the beach mice, we have that conceptually, but we don't have the data to support that. We all know it's true, but as Amy said, how do you weigh small stepping stone patches that are critical areas between larger patches...a classic landscape ecology problem, and we know the mice don't need a lot of space either
- DI Well, and generally, if it turns out that we are able to identify these biological sinks later on with collection of additional data, couldn't that be ruled in to the adaptive management and then reassessed or re-categorize those areas
- MF I very much like the idea of stating that explicitly in the plan, saying look, round one, we couldn't get the population effect, we did it on general landscape principles. At the first 5 year review, we want to reassess the population, do a genetic analysis of the mice, see if they actually got from A to B like we thought they would, or they didn't. We can get that kind of stuff, but it is definitely resource intensive
- DI Maybe your thinking is that you say, you run it, and this is where mitigation is going to be the highest, you're going to set your take, but you're going to be targeting areas for mitigation and going to be assessing fees for that, and maybe at year 5, based on the new information that is coming in, you're going to run it again. And maybe an areas that was a 5 in year 1 is now a 2 because of something that happened. Maybe there was a storm or a river blowout or something and it is no longer great habitat for those species. And you'll pick that up, but you won't be dumping resources towards that. You want to be able to do that and that kind of adaptive management. We spent a lot of time talking about the habitat quality index, the ranking and scoring of that. Did you do a similar effort for the management quality index
- MF A little bit
- KF Ok then...we're scheduled for a break, so lease be back in 7.5 minutes

Break

- MF So Amy discussed the derivation of the habitat quality scores measures. So what I want to do is walk you through two ways that we're using them. So the first is basically and overview summary of these...so basically I took the data from Amy and made summaries by R-zone, so those of the phone or those who haven't come across this term before, R-Zones are range monument zones that are about a 1000ft section of the beach in our plan area, so this is a handy way of diving up our plan area. When you do that, a plan doesn't magically appear, because these things are ambiguous in terms of the mitigation strategy, so here for interest, is, as much as I could show graphically, the sea turtle habitat quality scores regionally. And the fundamental question is, Well ok, is your mitigation strategy to keep the best good stuff, or mitigate where the problems are. And as we're talking about this, is kind of confounded by species biology.

When it's not good, you don't know if it's because of site fidelity, the site was good for 15,000 years, but for the last 50, it hasn't been good. So anyway, we can't unscramble that egg in short order, so we're going to have to use best professional judgement on these strategies. But I'm going to show you a couple potential ways of doing it. So the first big idea is basically what Dave introduced already, which is we can, if we chose to, use these habitat quality indices as kind of a courtesy for mitigation, a way of driving mitigation. And basically, that means that we have to score incidental take in terms of its biological impacts look at quality not just at quantity. So I'll show you some of those maps in a minute. But, even for the summarization, you need a set of rules for dealing with these things inside these three categories. And so I went ahead and took the simplest possible scoring system, but made it a little flexible so we can adjust it as we need. And so the aggregate habitat quality for instance for R-Zone is the number of acres in habitat quality zone number one times a factor, the number of acres in habitat quality number 2 times a factor, 3, 4, 5, and so on. So right there is simple linear weighting, so a 5 is 20% better than a 4 roughly. And this is by no means the only way to score these things, but this is an escalating score that says if you are causing incidental take on habitat quality number 5, we're more concerned about it that if you're having the same impact, same acreage, on a 4 than on a 1. So somewhere in there, I don't know what the curve should be, but there needs to be a curve. And so I'd like to start simple. And so if you play that out for the sea turtle case, which is all I'm going to show you for today...here's the sea turtle incidental take mapped out by county in terms of the simple quantity and here's the same in terms of quality. So you'll notice similar patterns overall and indeed some difference, particularly at the county level and the same thing occurs at different scales. So here's a map of the panhandle...here's quality, here's quantity. It pushes you slightly different directions. And you can drill down even further. This is a zoom to the 1000ft section of beach, and we have a score for each R-Zone of what the impact score we think is occurring in there. So again, this is the total number of acres times the rating of that habitat. At this level, actually at all the levels, it brings up a chart, and this aggregates out as to which activity are causing that score. So in this instance, it's 50% beach armoring and 50% single family residential. So that's the legend off of these colors. We can score the severity of take at that level. If you take that approach and summarize at the county level, you can generate, this is your basic take in acres and you can also generate an impact quality score. And that is the aggregate incidental take that we say is going to occur in that county. And I ranked these things so that you can see some of the differences that come up. In terms of ranking by impact quality, it probably wouldn't surprise the sea turtle biologist here, but impacts in Brevard County are ranked as highly significant, so that's pulling up the ranking in Brevard. In terms of the acres it's only, "only", 483 acres so it's 9<sup>th</sup> ranked in the state in terms of the amount of take, but it's 1<sup>st</sup> ranked in terms of the significance of that take.

GA And that's primarily because of density I would assume

MF Yes

AK The previous drafts had some other factors included

KF So the acreage of habitat is the acreage from the water to where

MF So it's within the plan area, so it's MHW line to CCCL line and the acreage of impact is based on a buffer that depends on which type of activity that is generating it. But it is generally around 100m for shorebirds for instance. So it would be the donut within 100m, 300ft, of any

commercial building, that's the incidental take zone. That include the direct footprint, with the direct impact, with the indirect buffer. So that amount of habitat times it's quality score gives you an impact score. So we're summarizing all of those impacts across all of those activities across a county across all time.

- BM and these are projected impacts of what could be filled
- MF Yes, exactly, filled and projected
- GA Are you doing any sensitivity analyses on the suite of variables that are included on the quality things so that we would know if, for instance, sea turtle density is really driving the quality index no matter what other factors you throw in
- AK We should, and for sea turtles that is pretty much the only thing we are using, but for the other ones, yeah, I would like to do that
- GA Didn't know if the experts thought this was the highest variable, the way we had them ranked and given the score, this should be driven by the variable the experts thought were most important
- MF Right, and that did come up, and it's a hard thing to do, as Amy mentioned, and we've discussed it at many work group meetings, but you have an intuition about things spatially, you think it's 50% this 50% that, but if those things only co-occur in 1% of the landscape, you spend a lot of time agonizing over the overall weight, but actually it's the combination rule you need to take account of. And in the initial discussion, we did have a few examples of that, and those are the override rules that you saw that came up. So we started with no override rules, everything was just an equally weighted average to start, and then we talked about different potential ways, and then we talked about an override rule, but we haven't done a formal sensitivity analysis of, let's say, double the weight of this factor, hold everything else constant, and double the weight of this, and see if that habitat quality index sizes any differently
- GA I'm just curious, how does Lee rank higher than Brevard, I can speculate, but is there a data explanation
- MF At that level, it really doesn't at the percent total take, it's close in acres, and if you look at it closely, there is sometimes an insignificant difference in acres
- GA Ah, you're right, I was looking at the take rank actually
- DI I'm a little confused on the aggregate formula that was on the previous slide. So this is the aggregate across an R-monument, so across 1000ft
- MF But we're applying it at the county level...we've got polygons, the aggregation area, we've got pixels inside that are 50ft x 50ft
- DI So is each parenthetical element of that a measurement that has been ranked
- MF It's the weight that we are applying to incidental take of that type for that disparity

DI So for maybe beach mice, it would be density plus relation to American oystercatcher

MF No, so the factors that Amy showed get distilled down into a single number per pixel, so I don't actually look at what's under that pixel, so as it comes to me, I say, oh, it's a 4, and gee, so is everything else in that R-Zone, so the average for that is trivial, it's a 4. But the impact score then is 4 x 4 x acres in this formula, so it's a little confusing because there's double 4s in there, but the weight happens to be a 4, so I could've put

JW So the higher quality acres count for more and the lower quality acres don't count for as much

MF Right, so right now it's a metering scale

JW Maybe it shouldn't be 1,2,3,4,5, but spread out further so that the higher quality is getting more weight

MF Yeah, and it's a hard one to make until you run it through the mitigation and see what results you get out the back end, and look at some places you know and say, oh this makes sense or this doesn't make sense, so I don't expect people to make a judgement on the abstract weight

DI So the aggregate habitat quality would be species or species group

MF By species group or per sub-species of beach mice, over a certain area. So Jimmy is bringing up the end game question, which hasn't been determined yet, but are all these across species groups aggregated, and right now they're not, so it's species group, by species group within a region. So right now the setup is, if you have a certain amount of incidental take on beach mice occurring in the panhandle, that is mitigated entirely separately from shorebirds in the panhandle. So right now, it's by region and by species group. Now you could put this all in one big bucket of money and use that at the discretion of the HCP coordinator year to year, but that's a policy choice. Right now, we're saying it's this aggregate at the species group level. AS an example, we could split it out by red know vs other species, but we haven't done that and probably lack the data to do that, but we probably could do that

JW Have you done wintering vs breeding

MF Yes, and solitary vs colonial

GA So the applicant would have to do mitigation for multiple groups

MF The applicant fee structure would include a fee assessment for each group

JW If they occur, if they don't occur, they're not included

MF Yes

MF So one rule I don't know how to get around is the credit/debit has to be in equivalent units, and to be clear about this, that puts a fair amount of burden on these habitat quality score as units. And sometimes that's fins, sometimes it's uncomfortable. If we're going to account for credits in terms of habitat quality, I believe those are reasonable units, well reviewed, because we're

charging people money based on them. So it's a cost and a benefit to this approach. The other implication of that means that then we would have to assess mitigation practices relative to this scoring system. That has yet to be done. I have some proxies in there now, but effectively, that means that we have to have a difficult conversation with our various species expert groups, and say, if we apply this package of mitigation measures to this beach and it's currently ranked as a 3, are we getting it to a 4 or not, and if no why, and if not, why not. We have yet to do that level of detail on mitigation, we're just identifying that now, but that's going to be a hard step to come, just to be clear. And if parts of parcels are allowed into a credit/debit system, that forces us to become explicit about these mitigation measures their effectiveness and when we don't have great biological evidence for their current effectiveness, we're going to have to estimate, and we're going to have to put that in the adaptive management chapter to figure out whether we've got it right or wrong. For example, at the 5 yr mark, we thought that predator control would give us a 20% boost in population, but it's 10%, so we need some measure to go back and course correct these things. There's no way to get these all right right up front when we're missing biological literature, specifically on mitigation measure effects, but even on the habitat quality scores. And Amy didn't mention it, but some of the people we've been working with have done quantitative peer reviews, published work, on habitat quality indices for some of these species, but we don't, by any means, have it for all of them. So there's a method for doing this, and over time, you can get it done and peer reviewed, but we just don't have that all for all of our species. So we're in the tough position right now that for some species and some mitigation measure, it's going to be really tough to assign these scores, but we know that up front. As I described earlier, we have this expert review and tweaking process, but the starting position I did to test this, was basically to say, let's take some of these mitigation practices and give them a default credit score, so if we apply a lighting ordinance to a place that doesn't have a lighting ordinance, we're asserting, for the moment, that it has a plus 1 score, but we'll talk to our species expert groups and try to sort that out in more detail. And same with every other mitigation measure we just presented. The default is that we're saying that each of these measure is 20% improvement in habitat quality. I have no idea if it's reasonable or not for some of these measures. It's certainly much more complicated than that and we'll have to adjust that, but we needed someplace to start, to try it out. Two other constraints, and these have both come up, we can't get credits for actions already taken, so that means we have to map current management practices as they relate to the proposed mitigation, but that's a burden to use, because we have to figure out where there are certain levels of management going on. And to state the obvious, you can't fund mitigation measure that are illegal or non-sensible. So there are legal constraints. That has yet to be figured out, but if we have a spatial planning system, we can do that. So, one example is that we can't "acquire" conservation easements except where available. More generally, I went ahead and created a set of indices for the next round of discussion, basically for the extent or urbanization in an R-Zone...is that suburban, recreational, use activity, and undeveloped. So those are 4 drivers that you might want to think about in every type of mitigation activity. So basically, we're generating these as spatial planning factors, but their use has not been identified yet. So here is a summary of city and county lighting ordinances, some work originally done by coastal tech.

GA How did you do that? Did you interview construction people?

MF yeah. The reds are ones that are the worst, basically.

JW Does the white mean they didn't do it at all, or no data?

MF No data in this case. We did have some gaps because there was an interview process and we had some challenges getting people to return calls. So basically when people didn't answer or call back, I assumed the worst of them.

So as one way of starting to sort out these various options, I came up with three different scenarios for ways you can do mitigation planning. The first one is 'best first' and that's working outward from the best habitat quality areas into adjacent areas of almost great quality. You assume you're more likely to get a 4 up to a 5, if its adjacent to a 5. Second scenario was not quite the opposite, but 'worst first.' So you go to all the counties that have no lighting ordinance, for instance, and you start there and work your way to the counties that added an ordinance last year. You go on a basis of mgmt. activities, and disregarding habitat quality at that point. The third is 'easiest first' where you mitigate first with the simplest measures in the areas where the ordinance or management context already exists. I think of these as areas that have all but the funding. It may not be financially easy, but implementation-wise easy. So that's not really a great long term strategy, but it might be an excellent starting point. So don't think of these as the three choices, think of them as strategies that we can practically combine to sort of phase the plan over time.

So at state scale it's kind of hard to see this, but here are each of the scenarios. There are discrete areas that come up when you zoom in, so it's not really covering the whole coast. And these are reviewable, so we can go talk to people on the ground and ask if these are the priority sites in your region. And if you compare them, they are different and that's consistent across the state. My conclusions after a quick round of this is that mechanistically we can make this run. A nice characteristic is you can get local detail out of it, even though it's a statewide simulation. But it's a diverse state and it will require a bunch of rounds of review and refinement. I can't just give you percentages and have you sign off on them. It will take a sig effort of review by people with expertise but also with people with regional and management expertise.

So the easiest first is probably a good starting point for the plan. Worst first is somewhat inefficient because it's not focused on habitat areas, but it can get everyone up to a certain base. And then best first is biologically optimized but it's missing cost and implementation staging.

There were some policy questions that came up along the way. The first is, how much is enough? The accounting method is kind of neutral on this, but we do need policy clarity on how we're advertising this and computing it, and they end up on the margin being identical but effectively you can express this as no net loss and basically say the target is to balance the incidental take with mitigation. You can say the same thing, but add a safety factor. For instance you can say well we don't know within 20% so we're going to add 20%. Or you can explicitly say we're looking for net conservation benefit, but then we need to know how big is the greater than sign, which comes down to a very similar conversation. That's not something that this accounting system is deciding; it comes down to the Steering Committee deciding which one. We've heard feedback on this one from the species expert groups. The state, for birds, already has some standards that is net conservation benefit, but I think there are others that are no net loss. So it's a policy decision for us to discuss.

In terms of the mitigation credits scheme, I think it kind of supports the triple bottom line that we've been talking about fairly well. So it's clear and it's explicit and it's applicable. It's quantifiable and it starts with some reasonable estimates, but the reasonableness of the estimates varies a lot by mitigation measures and species. But it supports both biological and economic analyses in a reasonably consistent framework, so I can pass this over to Dave and Colleen, and then they can pass it back to me. But clearly it's going to need short term review, but also long term adaptive management. If all the measures are good measures, then we've done a good faith effort. It's a quantitative way of looking at mitigation actions, so it puts a fairly high bar on us. Because we're being quantitative and explicit, we're being quantitative and explicit, and that's sometimes less comfortable. The final thing to mention is it doesn't treat non-spatial mitigation practices in a unified framework other than through money. And yet, I don't really know any framework that does. So public education, research, all those hard cases, hopefully the HCP will spend money on all of those, but some wise person is going to have to decide how that money is allocated. Should you spend 10% more or less on education? Should you hire an HCP Coordinator helper? So it doesn't treat any of those cases, to be clear; it's really focused on the spatial planning part.

So as we talked about earlier this morning, the route forward is we need to start doing some early review, starting with you, on mitigation strategies. If we go forward with this we're going to have to spend some time on mitigation measures effectiveness scoring with our various groups, and we're going to have to figure out the back and forth on the economics as it will relate to this. But this will give them a spreadsheet of acres with practices by region or even county.

These are the policy questions that I'll leave you with that came up along the way. There's a localism question – we've stayed within the FBHCP region for now, but we'll need to redo that a little bit for the loggerhead genetic units. The hyper-localism questions comes up a little bit, so that could be a strategy that's also explored. That keeps your conservation benefit closer to the people paying the money. So you could keep it within the county, for example, but you may have pushback on that because you're using funds less efficiently. Another question is should we mitigate outside the plan area. What I've done in all of this is assume yes to that question, to the extent that Amy has mapped the habitat. So that includes federal lands and also dunes landward of the CCCL. For beach mice I think it would seem pretty obvious that we would want to do that. For other species it may be less obvious, but in any case we're going on the assumption that we can mitigate outside the plan area. And then the federal lands issue I split out separately because that has sort of elicited some concerns along the way.

AB When we're deciding early first, best first, worst first. Are we doing that every time with each species groups in their own corridors?

MF Yes, it's by species groups with the exception of beach mice.

AB Okay. It seems like taking a more ecosystem approach, there's a lot of factors for that, as opposed to saying here's my mitigation for sea turtles and it goes over here and here's my mitigation for beach mice and it goes over here. And it does start to feel like, as an applicant, that I'm getting hit multiple times. There should be a strategy where conservation gets the biggest bang for the buck for the ecosystem. Maybe that's way too complex at this kind of level.

- MF It's certainly possible that we build our way towards that. Part of the way we've been building this is a little bottom up. We've been reviewing this with all the species expert groups, and we have not, to be honest, spent a lot of time on the meta-question of, given these five species groups stacked together. If we did the allocation as a whole for conservation easements, would we end up only in beach mouse habitat that had sea turtles and colony nesting birds or not. Prior analysis just on that overlap question, which we could go back to, there's this huge diminishing cost curve. So clearly those areas that are a triple threat or quadruple threat you get very big wins according to our scoring system by going there first. I don't know if you ask the question individually if you would end up with the same answer.
- GA The way this is going to be funded is through permits, correct? That's the main mechanism. These mitigation strategies can be extremely expensive – getting conservation easements and willing sellers can get very costly.
- DI You need willing banks as well, because usually you need adjointer if there's any encumbrance on the property.
- GA Right. So if it's going to be funded through permits and you know we've projected out how many permits are perceived to be in the pipeline over the next 25 years, you can pretty quickly figure out how much it's going to cost per permit per level of mitigation. If you were going to deal with all this mitigation, it's going to be a tremendous additional cost to the permit to the point where it becomes unrealistic. How do we deal with that? Does the HCP have to require a certain level of mitigation? Or can it all be theoretical in the HCP that's submitted?
- MF We're getting to it by starting with biology first and then costing out what we want and prioritizing within that. And if we need to pare back, we'll be paring back in a biologically sensible way. But we could pare back from the cost perspective, also the implementation perspective, which is a federal issue.
- GA What the Service requires is that the HCP be funded. It doesn't require a particular level of mitigation.
- AB Well you have to reach permit issuance criteria, so if you can fund something but it's not going to achieve that conservation gain, then you haven't funded the plan. You have to demonstrate that you've met that bar.
- GA I know, but minimization measures meet that in and of itself almost. Minimization is half of this and minimization is BMPs which is not an additional cost to the permit. So I'm wondering what level of funding for mitigation is going to be required, and then how do you track that back to what's reasonable in terms of adding cost to the permit.
- BM I'm unclear on the actual assessment of impact from a project that you're mitigating for. Do you have a quality of habitat and area, and is it based on the activity in that area?
- MF Right now it's based on the activity.

- BM So it could be a single family home that is expected to have certain value and then that's multiplied by the quality of habitat. What if that house is the third house from the beach? Is that the same right now under this approach?
- MF In terms of take estimates, the direct effects wouldn't hit the beach but the indirect effects would.
- AK The further away it is from the habitat the less impact it would have.
- MF Right. So there's two potential refinements in there, but neither of them are anticipated here. One is that you could make mitigation fees contingent on the size of the house or distance of the house from the beach. So you could add factors by policy that even apart from the land cause incidental take. But right now we're only working at the categorical level, so there's only one kind of single family house regardless of the size.
- BM But there's best management practices.
- MF Yeah, so it's done by the current CCCL permit types and the current minimization tied to them. So we're assuming that before we get to the take quantification. And that's one of the things that makes Gary's question difficult – what we haven't done is quantify the minimization measures in detail, basically. We could do harsher, harder minimization measures that would reduce take, and that would reduce the need to mitigate. But the assumption is that the bottom line is either no net loss or there's incremental gain to the species, and we're not making more beach habitat so we're having to fight over quality, basically.
- GA The reason I was asking that question is because it goes to the ability or the acceptance of the whole process. If a permit is going to go from \$500 for dune repair to \$2000, that's not going to sell.
- KF I think what Mike's saying is before you get to the cost it's how much is enough. These are human value decisions, and in my book, not science decisions.
- GA That's what I was talking about. What's the linkage between what you're doing and the actual cost of the permit?
- DM It should be related to the impact; you shouldn't have an average fee.
- AB I think what's nice about creating the categories is that you can demonstrate that list easily. Your actions should take quality one and bump it to quality two. What I'm not sure about is each action has a delta associated with it, right? But in some cases maybe you're using minimization actions so there's no delta, no change. But what you're doing is looking to offset your delta. I feel like the way you guys have created these categories you can start to demonstrate that.
- BE Back to Gary's question of do we have to be specific, and the answer is yes. On one hand we've been very detailed in assessing how much take is going to occur and the Service is going to need to know that the mitigation that we're proposing is sufficient to offset that and hopefully result in a net conservation benefit. So we have to be very explicit in what we're going to do for them

to be able to make that assessment, and of course part of that is assigning cost. Then on DEPs side is how are we going to cover all of these costs, not only for the mitigation for all of the administrative costs. So that's when you partition it out and assess fees based on some formula that deals with relative impact that's likely to occur. And that's been one of my concerns all along is that as we go through and development this whole program, when you look at the whole implementation of this HCP the costs are going to be very substantial. And not only are there going to be additional mitigation impact fees assessed to the permit applicant, but they're going to be responsible for additional monitoring that they may not have done in the past. So there's going to be a lot of additional cost with this, and I truly do appreciate everyone's concern that that's going to be a factor in trying to sell this to the administration.

KF It seems to me that one of the key differences here is beach is different than other mitigation examples we have. And I don't know how much consultation has occurred with the existing UMAM, existing FWS panther habitat units. There are systems at play now that work, but the key difference is that they tend to be linked with habitat buying and setting aside easements, and there's a critical difference in the shoreline issues with ownership. I mean real estate is expensive in Collier County, but for years the Service has come up with a system for panther habitat units and people can write a check if they care to and buy similar quality habitat. I think it's a more difficult problem, though, on the beach not only because of the cost but also the ownership issues of public lands and access. But I think the good news is that if you crank some numbers you can get tremendous compensation through lighting and other things that were mentioned earlier that you can get a lot of conservation lift, and probably more than buying acres on the beach.

JW But here's the thing: back to making sure we're not getting credits for actions that are already taken. How do we set this up such that we're not creating a disincentive for people to implement these practices until they're ready to apply for a permit? The only thing I could come up with is making them follow BMPs rather than mitigation.

GA We're not reinventing the wheel here on HCPs. All of the HCPs out there, how do they deal with the issues that we're talking about? Are y'all looking at other HCPs and comparing them?

MF In general, other HCPs are much smaller and much more specific. I've looked at a bunch of them.

GA But is there a high level of mitigation?

AB I think that's one of your issues here. Your baseline for a fee is very low, but your conservation for species is also very low in the current program. So now they're covered for something they used to not be able to do. I know you've been doing outreach with the counties, but I don't know where their interest is in being involved. Some of the mitigation is going to rely on their compliance officers and their code enforcement. So they need to be integrated in here somewhere.

DI And I don't know how much we're going to be able to rely on them because this is a state HCP.

AB Could they also be a signatory to the HCP?

- DI That might be a heavy lift. I have a couple of clarifying questions. Are we assuming that every permit is going to have a mitigation fee associated with it? Because there should be some activities that are permissible without any mitigation.
- JM I think that for some lower impact activities, if they follow all the BMPs then they would be covered.
- AB But there is a way to bolster the overall amount of money you have going into the program, right? If you do have some palatable fee to everyone from the get go.
- DI That's why I thought we really needed to separate the administrative costs of the HCP as a statewide benefit versus the mitigation costs. Because applicants across the board can bear some increase in permit application fee as part of the administration benefit, but they may not need any of the mitigation benefit. The other question I had has to do with a comparison to the way mitigation is done in the ERP program. Applicants propose and applicants choose what they want their mitigation to be. It can be writing a check to a conservation bank or a mitigation bank or some other large scale acquisition or land improvement or it can be something that is more specific to their management options. It sounds like the way we're setting up the mitigation scenario is that it's going to be plan driven at the discretion of the Department as opposed to giving the applicant the freedom to choose which mitigation option works the best for them while still offsetting the impact.
- BP I think the big difference in making that comparison is that those are evaluated on an individual basis so that you have little bits of mitigation everywhere because they're unaffiliated projects. Whereas, with this program the ITP is going through DEP to cover their program, so all the projects are associated with each other. And it has been documented that when you can group the mitigation together, it is cheaper than doing the postage stamp thing. The other difference is that in the ERP program and wetland mitigation and others, mitigation banks and conservation banks exist. So those options are already there and there's a market for them.
- TO Since we've started this I don't think that any type of banking or acquisition or easements will work just because of the cost of coastal property and amount of money you'd need in a trust.
- AB But it sounds like there are a lot of other actions we could take besides acquisition.
- JW Gary, I'm sensitive to the point that you're raising. The flip side of that is this is a one-time expense, but the loss of habitat is lasting. So I do think that for the Service to be comfortable with it, it has to replace the value lost. We may need to think about how we message that to applicants, because you're right there will be some sticker shock, but I think one of the points we make is that there is now an opportunity that was not previously available and at the same time if they prorated that cost over the lifetime of whatever permitted activity they're doing, it comes out to a reasonable or even modest expense.
- BP I think we're comparing that cost with a cross structure that exists on a totally different scale. Of course nobody wants to make someone who's building a single family residence not even on the beach pay so much in mitigation fees that it's cost prohibitive for them to build, but in this arena you're talking about property owners who have money. I'm not saying we punish them because they have money, but I'm saying that maybe our evaluation of the scale of difference

should be a little different. I think we're getting wrapped around the axle on that when we haven't even given these guys a chance to figure out what that dollar amount might be. I think we have that conversation after that's all figured out.

- BM I agree with a lot of what I'm hearing – Gary's concern and especially Danielle's concern. Having been involved with that program for 25 years it's hard to sit there and say that all of these projects that have been permitted over the last 25 years have all had a substantial impact. That's a hard thing to sell. There are areas where they're issuing permits where seawalls have existed for the last 50 years and they're just developing upland and not really having any impact on the system. Yeah, they're contributing more people to the beach and they're probably contributing to some collective glow of light. One of my initial concerns was not being able to tier the assessment of impacts. As Ashleigh was saying you can get something from everyone with those little projects and you can probably justify it because there is some type of secondary impact, but the Department has general permits that they issue. And they're general permits because they say if you build behind this line, we're okay with it. We don't even have to look at your lighting plan or your landscape plan; you just have to indicate that you're in compliance with these standards. And sometimes that line is only 25 feet back from the regular line of construction. So I think there are probably opportunities for those areas that are set back enough, you can get some fee from them and then increase as you get closer to the beach. But just so you know, the fee now is around \$4000 for a single family home, and then another \$1000 for a pool.
- JS And condos run up to \$15,000.
- GA Even if you look at all the permits you project out over the life of this plan, it's still going to take all of those to make this happen.
- BM So maybe the areas where you have higher quality habitat, maybe the tier structure is a little different or it's factored in for those areas versus other areas. There's probably justification for everyone to contribute to the fee, but the more complicated the fee structure is for what you're trying to do for mitigation there's going to be a lot of costs. And who's going to do the work and implement it and monitor?
- KF Earlier we talked a little about issuing operation style permits as opposed to construction permits and the need for legislative change. We've talked in the past about that the permit continues and that would potentially require an operating cost to allow whatever agency to sort of check on compliance 20 years from now, rather than a construction permit. I was wondering if that legislative change was made and somehow it's not a construction permit for \$4000-\$6000 or whatever, it's a permit but it's got a long life. The structure's still on the beach. There's going to be maintenance costs. I'm thinking of a one-time fee for the permit, but it's an operating permit with maybe an annual cost.
- GC That may be determined by whatever monitoring is required under the HCP.
- AB And that's parallel to how the Service views take. Take is an ongoing action, right? There are long-term effects of putting in that seawall over the life of the plan. And it would mean that those permits that DEP currently issues where you don't think take is occurring over the long-term, they wouldn't need that secondary permit or that long-term mitigation strategy.

- GA Maybe we should be looking at other options for funding, expanding our creativity here. I'm not saying that we shouldn't do the permits as the major source, but maybe we should be looking at other things. I'll throw out an example, and maybe it's far-fetched, but why shouldn't the state be applying for BP funding for long-term HCP support? Wouldn't that be a valuable project that's going to be billions of dollars coming this way? The state submits proposals. The proposals are supposed to be for mitigation for the harm caused to the beach. It just seems like we should be looking at other strategies so that the entire cost of this is not borne on the permits, and I don't know that we've done that yet. I just wonder if that's something that we should be directing the process to do.
- JW Would that be double dipping, though?
- GA I don't know. I'm just throwing out that there may be other possibilities.
- KF Gary, you raise a very provocative question with only two minutes left in the meeting. I want to be respectful of our schedules. I don't know that we have much or anything in the parking lot.
- DI The parking lot item was trying to get understanding of the way the Service and the Commission defines what take is. And that's not a topic that's limited to this HCP; it's ongoing between DEP, FWC and USFWS.
- BM I was thinking of permit structures, and if the Service looks at if you put a wall in here and it's comfortable to Robbin and her staff because you're not in historical nesting habitat and you're behind the dune and you're close enough to the building, could the Service say, well 30 years from now that's going to take habitat. So could a house, a condo, a swimming pool. So it could get complicated when we start talking about projecting into the future potential take. That doesn't make sense to me.
- KF Is this a topic that should be on a future agenda for more detailed discussion? Because we don't really have any more time for it today, and as Danielle mentioned there are other groups that sort of align on the issue.
- BM I don't think we're going to solve it today, but I just wanted to make the point that it goes beyond seawalls; it applies to anything that's permanent.
- KF Maybe we can mark that down for future discussion and the Work Group can chew on it a bit because the Steering Committee doesn't get together very often, and bring back some way of helping the dialogue occur.
- MF I think we need to consider in greater depth the potential permitting fee structure including some research on what's been done elsewhere. And that falls into the broader bucket of stakeholder perspectives on plan implementation. It's timely for the scope of work that we're starting next year.
- KF Any comments from the public? Hearing none.

