



INFO CENTRAL

- Topic:** Dune Restoration 2024
- Guest Speakers:** Michael Poff, PE, President, Coastal Engineering, Inc
Matt Logan, Charlotte County Projects Manager
- Presented by:** Palm Island Estates Association Inc. (PIE)
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Audio Transcript:

[Matt] Logan, {Charlotte} County {Projects Manager}, and Michael {Poff, P.E. Coastal Engineering} and I have worked closely together for almost 20 years. But I've been in charge of the Beaches now for about 10 years; close to 10 years. So we work very closely on both Palm Island and Manasota Key to make sure our beaches are maintained and renourished when need be.

Having said that, Michael and I, we were done pretty quickly after the storms to try and do some storm evaluations, and we have Mike with us today to kind of present what we've done, what we're going to do and where the money is coming from.

Thank you both for the introduction. Michael Poff, President of Coastal Engineering Consultants. We're based in Bonita Springs. We've been a business since 1977, working for Charlotte County, and the residences since that time. It's one of our first clients. I joined the firm in 1993, and assumed control, and took over from our bosses, who retired in 2017. And, as Matt said, we've been working together on the beach program now, really, began in 1997; myself, with the interim dredging of Stump Pass which morphed into our beach program, and the major project that was done in 2020, sorry, 2003. to really make it a beach program and not just an inlet navigation dredging program and restore all the beaches. And since then, we've done numerous maintenance projects to restore the beaches, mainly after storms.

We had Charlie, you know, '04, plus several storms in '05. We got hit with a tropical storm in '08, that did a lot of damage, again in 2012, and then 2017 Irma and multiple projects. So, each time, we've done the response, we've sought and acquired State and FEMA dollars to help offset the costs.

And then in 2020, we teamed with Manasota Key. So, the county did a very comprehensive where we went offshore for the first time and used the sand body offshore to put sand on the beaches along the Pine Island, Don Pedro Gulf front beaches, and then just used Stump Pass for the beaches on both sides of the pass. And so now we're into a maintenance mode, and we'll go through some quick history, give you some statistics and then talk about what's coming up next.

So, you wanna get us to the next slide, please, Matthew.

Can everybody hear me okay? yeah, it's great.

So, I'll recount the 2020 project. We'll give a little bit of information on Manasota Key. I'm sure you have some interest up there, plus by teaming together. You all save money and sharing the equipment costs to bring the dredge into the area to do the work. And then talk about the 2022 project where we dredged the Pass the last time. And then talk about the storm damages and where we're going to next. So,

[Unknown Speaker] Perfect.

Michael Poff

03:21 So, Manasota Key did not have renourishment done on it. You, this community and your ambassadors back in the early 2000's basically went to the Board of County Commissioners. So, I like to call them the party of 5, and asked to be part of a managed beach program based on a study that our firm and another firm, Coastal Technology Corporation, did a joint study for Sarasota and Charlotte County. Manasota Key did not get into the program until much later. And so, they finally got into the program. We got a permit. And so, 2020, we go to construction. You can see some of the significant conditions of erosion that they were faced with which you all dealt with back in the early 2000's when for those of you like, the Savannah house, used to fish off the balcony, and so you're all shaking your heads yes, so those have been here that long. Remember those days? And so, our goal is not to have the water left underneath those houses and pylons that were again...

(Next Slide) and so go ahead, Matthew, maybe, there we go.

So, the total project was 3.8 miles on Manasota Key, 880,000 yards was placed, which is a very comparable number to your 2003 project. We did about 900,000 yards in 2003. The bar areas were offshore. The contractor of Great Lakes Dredge & Dock used their hopper dredges. And so for those of you that were here, you would see these dredges working offshore and pumping sand to the beach, so they would take the sand off at the bar area 4-5 miles offshore. They would sail into the near shore and just pump out through a submerge pipeline to the beach.

So, when you saw them pumping out, they weren't digging right there, they were actually just pumping out the sand. And so that's a typical hopper operation where this hopper dredge basically sucks to sand off the bottom off of the sand troll. It's a ridge of sand. And so basically, we scalp the ridge and took the sand off the top. It was probably a beach about 3 or 4,000 years ago, at a different level of sea level. We had estimated about 30 million dollars that came in just under budget and we also had Sarasota jump in on Manasota Key. So, Sarasota, Manasota Key, Charlotte, Manasota, Key and South Beach or Don Pedro complex, all were constructed at the same time, same mobilization and that saved about 8 million dollars to all of the taxpayers of Manasota Key and this island.

Go ahead Matthew.

Oh, the state cost share is about 35%. So, they contribute 12 million 13 million dollars of that 30 million dollars price tag.

So again, from Manasota Key, if you've been to the public beach, this is a before and after picture showing the stars representing commonalities in the pictures, and so we add about 125 feet of beach and when we talk about beach nourishment 7/8s of our beaches are underwater, it's like an iceberg. So, we overbuild the beach at construction, and then how that sand moves underwater to basically create a platform by which the dry beach can be stable.

[Next Slide] and Matthew.

So now down to South Beach, because of the fact that we're in a bridgeless barrier island, the contractor used the ramp barge and their equipment to offload onto the beach directly. And so that work started about April of 2020, we finished up in June. This was a maintenance. Again. We had started this project in 2003. So, this is the third time I received a major project, and so there was about 1.65 miles. If you're familiar with the West Coast inland navigation district, it's a regional entity. They own some lots out here in the county...have an agreement to use that for construction access. It's also about the point where the beach has experienced chronic erosion.

The area north of that has been benefited by the influx of sand around the salt pass shoals, and so we have a very stable beach from about the south end of the palm resort for about the first 2,000 feet down the beach. It's been very stable, and in fact, it's created say since 2003 when we first built the project, so we haven't had to put sand back in that first 2,000 feet since the initial project in 2003.

So, we place sand there and it comes all the way down to Colony Don Pedro, and we had this, we rebuilt the template, which is about a 75- to 100-foot-wide beach. We rebuilt that template, and the goal is about every 8 years to have to rebuild that template. Now, of course, we've had all these storms, so it has eroded. And we'll talk about that in a minute.

[Next Slide] So go ahead, Matt.

Manasota Key had an issue with their hard bottom. So, this is an actual resource, because they waited so long for restoration. The underlying limestone that's that kind of [resource] is below all over sand. Here in the Southwest Florida geology, it became a resource, they had to mitigate it and build a reef. So, you might have heard about this in the news, or you may, if you're a fisherman or a diver, you may have actually visited the reef already. So, we built 2 reefs of a very large one, right off of the northern end of Manasota Key and Charlotte County, and then one smaller one just off of the county park up there. And so basically just placed boulders in an area that was sandy and had about 18-inch veneer of sand over that underlying limestone adjacent to existing hard bottom, so that all of the sponges and critters that live on the existing hard bottom will migrate onto our reef and serve as an ecological functioning reef.

[Next Slide] Go ahead Matt.

Fast forward in 2022. So, it was time to dredge to pass again. We had FEMA money from Irma that was able to be used and so FEMA cost share, and then the State pays for all the sand on the State Park beach on the north side and so we placed about an equal amount, a little or very close to a hundred 1,000 yards on both sides of the pass. It was a navigation project first and foremost, but of course the sand benefits both shorelines by putting that buffer from wave energy and also create sea turtle and shorebird habitat.

[Next Slide] Go ahead, Matt.

Michael Poff 09:50

So, let's talk about our storm. So, Ian strikes, you all lived it, and you're dealing with it. You're still in recovery mode. And so, the Beaches experience significant erosion as well. I understand that we did not have flooding on the island, but all the damage was from wind and rain and roofs being blown off, and things like that. So, the beach absorbed the wave energy. The dunes, as we understand, [water] really weren't over tops during Ian, but so there was some beach erosion.

We did the storm assessments for the county. We had all of the work done in 30 days. We went ahead and made application to the State and to the Federal Government, and so we now have funding available from both the State and from FEMA for our next project to put sand from the loss of Ian back on the beach.

[Next Slide] Go ahead Matt.

But we weren't done because Nicole hits just a brief time later, and Nicole did additional storm damage, and so we applied for and got additional funds from the State of Florida to help offset the erosion from Nicole.

[Next Slide] Go ahead Matt.

So, as we were planning the next project, Idalia strikes in 2023. So, before we could even get our act together to get the dredge out here. Lo and behold! We have Idalia, so again we did the FEMA assessments. We calculated the volumes, we've applied now for the FEMA dollars, and that is currently under review by the Federal Government. And so, they are reviewing the Idalia claim right now. And so, what the county is doing is they're asking for an extension on the Ian money so that we can mobilize the dredge one-time and go ahead and put the sand back from Ian and Nicole and Idalia under one mobilization effort.

[Next Slide] Go ahead, Matt.

These are beach profiles, and so the vertical axis is elevations and a certain vertical datum, and our average water level is just right above 0.

This is the distance on the X axis, going offshore 800 feet out into the water and so, in this is one, Manasota Key at the County Park.

The teal line is February 2020, the pre-construction beach line.

And then the purple line is after we had placed the sand on Manasota Key in 2020, and then you can see the beaches eroding landward, and we're losing elevation. So, we've lost a lot of beach. We've lost about 50 to 60 feet of beach in width, and we've lost about 2 to 3 feet vertically of sand off of this particular location. And it varies. Obviously, the erosion is not consistent. Some places eroded worse than others.

[Next Slide] Go ahead.

So, this is, we call it the Updrift Beach, updrift on Stump Pass. This is the State Park very similar patterns of erosion from the storms. And so that's what we're best at what we're doing. We're out there surveying. As soon as we can access the beaches safely, our crews are out here surveying on your behalf to measure these changes.

[Next Slide] Go ahead, Matt.

So, the north end of the island, north beach is the Palm Island shoreline on inside the pass; its where we replace the sand from the dredging. And so again, very similar patterns of putting the sand out there. Mother Nature erodes it and... what was interesting, and I'll show you another slide about Idalia. But the returned water from Ian actually scoured out the pass, so we had just finished the dredging in 2022. Ian hits in September. That's some pretty significant feature erosion, but it actually blew out the pass. We actually had sand moved outside the pass and actually cleared it out. So, we actually had an navigation improvement. Not that I'm saying Ian did anything positive but in terms of that return water, when, when the waters came back it did clear, and we saw that throughout Southwest Florida. We had major beach erosion, but the inlets all got cleansed by the return waters who had met. Okay. So, this is about halfway down the Island...probably about oh, maybe a 1,000 - 2,000 feet south of the Savannah house maybe just south of Beach Place. And so again we have in April of 2020, we have our pre-construction survey from the placement of

sand to 2020 project. The purple is after we place the sand and then it eroded back from the storms. Then Ian took out a big chunk, but Idalia is what wiped out the dune. So thankfully the dune was there and what happens is, while the dune got wiped out all that sand ended up widening the beach. So, a lot of you said, well, you know, the beaches are now actually wider than it was before the storm. That's because all that sand was released from the dune. And actually, so now the beaches are much lower and a little bit wider. So, the goal is in our recovery project is to rebuild the dune.

We're gonna put the sand back and rebuild the dune in the upper beach with the sand that we bring in from the next dredging and that's with the FEMA and State and your local tax dollars. You all pay into 2 different taxing units. There's the municipal services benefit unit, the beachfront owners, and then there's the municipal services taxing unit which is the West County that pays into Stump Pass. And so, there's a prorated scale that was done. And so, you see that on your tax bill, and this is what your money is going to is to keep the beaches and the dunes healthy, and so we will rebuild the dunes, we will pump the sand in, and then we'll have a bid for dune plantings. And so, I assume it will be a local nursery, although it's open competition, so it'll have to be a Florida seed source and then we'll come in and they will replant the dunes and to re-establish that vegetation. So, our goal is to put the beach back the way it was before these storms. So, we create our resiliency plan for our beach and dune system.

[Next Slide] Okay Matt.

So, this is a summary of all the impacts from Ian, Nicole, and Idalia. So, we also monitor for Sarasota County. So, they lost about 50,000 yards between those 3 storms. Manasota Key Beach, about 70,000, just from the State Park Beach, about 57,000 yards. The North Beach on Palm Island shoreline, 41,000 yards and then South Beach, again because of that dune loss, about a 140,000 yards. Obviously, it's a longer stretch so that the volume is higher. But if you [took the] divide the volume by the length, it's like 7 yards per foot of loss across the counties for the measurements. So...

[Next Slide] Go ahead, Matt.

So again, for those of you who are Manasota Key and what the knowledge on those [dunes] as I mentioned about 70,000 yards. And Manasota Key, we're gonna truck the sand in. It doesn't make sense to mobilize an offshore dredge at 8 to 10 million dollars to just place 70,000 yards, and we can truck sand to the beach. We can use Englewood Beach Park as an access. And so FEMA, the way the erosion calculations work, FEMA only pays a certain calculation, and then the State pays on top of that. And so FEMA's eligible quantities, about 50 of the 70,000. We've requested 4.14 million total and then State of Florida, we requested, initially, 1.6 million. We requested additional dollars. They have not been approved yet by the legislature, so we'll be seeking another about 1.23 million dollars. The total budget is 7.67. So, if you add the 4 million from FEMA and the 2.8...so that leaves about a million dollars, which is the local share. So, your tax bill, which you're paying, we'll cover that 1 million dollar share of the project. So, FEMA would be paying about 40-some percent. The

state about... maybe 30. And then you guys will have the balance. So that's just rough math in my head. But you can, and so, Matt will have these posted on the county website after our presentation today, and if you want more information, but I'll take a slide from the University control project as well. So those of you who are the voters in the room, this is a post Idalia math and metric survey. And so, these deep blues are the deeper waters. It's 12-14 feet in the throat as we move it out over the shoal it's up to about...let me get our controlling depth. So 6.4 feet mean low water is our controlling depth. Our goal is to provide 5 feet mean low water at all times through the mark channel. And so, the only positive thing...and again, I'm not trying to say Ian was positive. But when Ian blew that sand out, it was actually about 8 feet deep and so it has shallowed up to about 6 and a half after Idalia. And so, this summer we will survey the pass again and have a current condition survey. I have not had a voter call me in years and that tells me that the pass is clear. As soon as there's a problem, I get a phone call saying, "Hey, get out here and check out the pass. We think there's a problem". So, there's enough voters in the room and up and down the Key that I'm friends with that let us know if there's a problem after a storm. And so, the fact that I haven't gotten those phone calls tells me that that's so far so good, that the pass is holding up. So...

[Next slide.]

So, Matt and I walked the beaches last week, course, since we got here, started to rain. So, we were dodging the raindrops. So, the pictures aren't exactly the brightest and cheeriest, but I'm standing on where the where you can take the golf carts up to the north end and walk out. This is my landmark. So, when I started working with the county, this tree was here, and it was, the water was lapping at this tree in in 1997, and I decided, as long as that tree is still here, then I'm doing my job, because that means I found, I found the line, and then some. So, we have a very active shore bird colony on this beach...and so we get lots of great nestings from the Terns, and the Skimmers, and the Wilsons and Snowy Lovers. One year there's lots, the next year there might not be any...finicky as to where they like to be.

But we go to the next slide.

We have a shore bird mitigation component of the project where we clear. I say we, the county clears four acres. So those of you who know Suzie and Jamie and there's a new gal is with natural resources. If you've met them, they come out and they clear this area. And so, this is where they really where the birds like to be in this area. So, we have those maps, they're available. We've mapped the Colony's, and we put them on aerial photography to document those to help guide the ecology of the region. And it's a database that the State of Florida maintains. So, we've had a pretty robust bird monitoring program and successes along these islands for a long time. And so we have also have local monitors. Are any of you the monitors in the room by any chance? I didn't recognize anybody when I came in, but there's about 4 or 5 locals that we, the county, passes through our contract, that we pay them to come out and do the monitoring. And then there's the turtle folks any turtle monitors in the room that work with Brenda Bosman, or with WCIND. No. So, without those monitors we could not do any of these projects, because by permits you have to do all the

monitoring. We have to have protection plans in place during construction, and so we always thank the monitors for all their work. They're out there every morning, bright and early, making sure that everything's done appropriately. And so here we are, 9 islands. So, this is, we walked out the WCIND Lot and look south. You can see the storm moving in. So, we got back in the truck. We were gonna walk it. But we decided we better, we better drive for the south end.

[Next Slide] Go ahead, Matt.

So, we jumped in and popped in down The Colony, Don Pedro. And so right now, if you just look at this picture, you'd say, Hey, that's not too bad. Right? I mean, we have a pretty dry, sandy beach. There's still some dune left. But if you think about what was there before the storms, it's a significant amount of erosion that occurred. So again, we're gonna try to come in and rebuild that template. So, here's the dune. Obviously, we've had a lot of dead vegetation. So, we lost elevation. So, we're gonna come out and add that dune and then add elevation on the beach and again planted with vegetation.

So, think we got just another one or 2 more slides. Oh, that's right. We want, we wanted to talk about this as well.

So, in order to get the funding you get from the State and Federal government, the beach has to have public access. So back in 2000, Matt Horton put together a plan with all of the input. Of those that were here then, and got support to do these MSBU and MSTUs, and he also went to, well, Palm Island Resort I believe, when they did their development plan, granted a 15-foot-wide public access easement at the very south end of the resort. So that gets marked. And that's a public access point that we had to come in and clear right away and stabilize for parking. And then Matt worked with the locals. So, we got the WCIND lots. There's 2 of those. We got, those to have a footpath, so the State says it has to be a 5-foot-wide path from the road to the beach, has to be marked, and has to have parking within a quarter mile of that access. And then some of the ambassadors helped with Beach Place and with Colony Don Pedro. So, Beach Place and Colony Don Pedro have granted us public access easements and the county is currently requesting they'd be renewed because they currently expire in 2024.

And so, they're asking both Beach Place and the Colony Don Pedro to renew by doing this effort and continuing this effort and maintaining our public accesses and parking, you get about 45% state cost sharing, and keeps you eligible for FEMA funding. So locally, that was controversial. Why are we letting the public park and come to the beach? Well, it's because it's a huge cost savings. So, anybody can pay to come on the ferry, come across, park and go to the beach. It has to be equal for everybody. Granted, the ferry has a cost. But that's okay. If you drive to Miami and you go to park, it's what 10 bucks an hour to park in a parking lot on the beach. And so, if you wanna go there for 5, 6, 7, 8 hours, you might pay 50, 60, 70 bucks to park to go to the beach. So, it's a, it's a companion to that. So, across the State, as long as, it doesn't have to be free, it just has to be equal and open to the public and the residents at large. And that's how it works.

[Next Slide] Go ahead, Matt.

So, I'm kind of zooming in. So, you can see these areas a little more closely. We have a professional company who flies aerial photography. So, this aerial and these maps go into a funding application every year on your behalf. And so here we are at the kind of the south end of the resort moving south. So, this is that public access I mentioned at the very south end of resort, and the county gets to maintain about 28 parking spaces within a quarter mile of that area.

Here was the first WCIND lot. And this is about again, where the filament has been for the recent dredging projects of the sand has come from here and gone south.

This is the Beach Place public access. and then one more slide will show you down to the south end. There's a WCIND lot access D, and then access E is right south of the pole at Colony Don Pedro.

[Next Slide] Go ahead Matt. And Matta has, he just did the updated parking. So, he has some updated maps so people can grab them who are interested in it. [Maps on Table]

And so, for the erosion control project. The volume is about a 140,000 yards. Similarly, we have State and Federal funding the current schedule. We've submitted the engineering report. It's currently under review by the FEMA subject matter experts we actually met within our office yesterday to go through. We have about 9 active projects between Charlotte and Lee County from Ian through Idalia. So, they came in and met with us. They'll ask questions about the reports. We will answer those and then it has to go through the Federal review process. Ultimately it has to get public notice and reported to Congress.

And so, our goal is hopefully by this summer. If the current schedules that they've done for us on our past claims holds true. By the summer we should have the daily claim obligated and then the county will have us put out the plans and specs, advertise for bidders, and then, if it all goes well, come November 1st through hopefully February, we will be done before shore bird season or close to it. If we can get off the beach before then, that would be great to commit and place sand on Stump Pass Beach, State Park, and Palm Island north and then the Gulf front beach and we'll use the sand from Stump Pass to do that and that's the plan.

Is that the last slide?

So that was our presentation, and we will try to answer your questions and what we can't answer today we will jot down and try to get answers back through your ambassadors who set this up for us today.

[Questions and Answer Session]

Yes, ma'am.

Q. With the County through with the State, and paying for part of the speech renourishment, what is the ruling for people who live on the beach? What is the ruling for people encroaching on their property? I've always been told it was the mean high tide. But it is definitely abused. And how is that ever monitored?

A. [Michael speaking] So if I understand your question, you're asking about private property, where do you own on to the beach, and with people walking through your quote unquote private property, or across your private property.

Matt, will you bring up the aerials for the beach.

So, the Palm Island Resort did a beach nourishment project in 1994 and then the Charlotte county's was in 2003 as part of those projects. In order to get public funding, we established what's known as the Erosion Control Line. The Erosion Control Line was the mean high tide line before construction began that has now become the property line for all of the Gulf front property owners. So, this is the line. So, Palm Island Resort in 1994 mapped the mean high-water line. So that's where the Gulf was in 1994, along the south end of the island. Since then, this has all been natural accretion which is why we don't have to put sand there because that beach has accreted significantly by Mother Nature's processes. Then, when we did the project in 2003, you kind of see this jog right here. So, this was the water line along this property in 2003, and then this is the Savannah House, you know, the water was underneath the pilings. So, we mapped that erosion control line. And so, this is your property line. And so, the rest of this, from this black dash line seaward, is all State owned land and that pretty much runs through the majority of the dune. So, for those of you who live south of the resort you can kind of see that that line is really up in the dune and that is your private limited private property. So, in terms of people walking the beach, if they're walking out here, they're on state-owned land.

Can you show the next slide?

So, see how far it goes property lines down?

[Unknown speaker] Absolutely. Yup.

[Michael speaking] Okay. So, then it continues, you can again for the most part [see] the water was so far eroded that the dune is about where it's at and then the beach stops at the limit of the private property, and then this is the State Park, so we don't put sand on the State Park beach, and the erosion control line stops at that last home.

Go ahead, but Linda, you had your hand up too.

Q. [Linda] But, I also want to ask if there has been any consideration when the dunes come back...about the access...because of the blow outs where people walk through

the accesses to the dunes...so have walk-overs been considered or zig-zagging paths which might stop you know erosion in the future?

A. [Michael speaking] Zigzagging paths, for sure. But I don't, I don't believe that there's any plan to try to put any permanent structure. I don't believe that any of the public easements we have from those owners allow for that. So, we'll go here, and then we'll come over here. And then I saw one over here. So okay, if there is an existing dune right now, that they didn't get wiped out, are they gonna still put the dune in front of it like it was before the last event that removed them. We're gonna try to rebuild what was there. We have profiles and show what was there before the storm. We'll do our best to get as close to that as we can.

Okay.

So, cause it was nice that we had 2 of them.

Oh yes, correct.

One got wiped out but the second one is still there. Correct, so the most seaward one will be rebuilt.

Okay. Yes. Thank you.

You bet.

Can you show the south or the very north end near Stump Pass for the property line?

So that area is does not have an erosion control line. That's a great question. Because we dredge the sand from Stump Pass, and it's beneficially placed on the adjacent shorelines there is no erosion control lines.

So, the people who live north of, go back one slide Matt... the people who live north of this point, own to the mean high-water line in the Gulf of Mexico and inside the pass.

Q. And who monitors that? Because that's where it's really abused.

A. There is no monitoring that I know of.

[Michael] Hand over here then I saw one over here. Go ahead.

Q. And this may be a Matt question. But you mentioned that you got to get the renewables on the access points, and I think it will be easier to renew if we knew that if everything will basically be the same with number of parking spaces and that sort of thing.

A. [Matt speaking] I can understand that and that's why we do these updated parking maps over here on the table where actually, I'm going to be working shortly here in the in the not-too-distant future. I'm going to be working with our Maintenance and Operations Department to come out and place the shell down in our parking spots. They're gonna have to do a little bit of reclaiming where some of the vegetation has encroached into those, but very soon you should see that those parking spots are back, well-marked in place, well-identified. And I just think it might help to get those approved... necessary approvals to the different associations. If we can kind of say that there's nothing more, you know, worse happening. It's gonna all stay the same in terms of parking spaces.

So that's good back here.

Thank you.

Be patient.

Thank you. Yeah.

Q. I wanted to find out, do you guys have like a schedule and or and or graphic of which areas are gonna be in the restoration project? Like this is allocated for south beach, or north beach.

A. Matt, can you go back up to the summary slide that shows all of the erosion? And how much, how much footage of beach for each of those areas is going to be restored?

Okay, so the goal was to put about 57,000 yards north of the terminal growing in the Stump Pass Beach State Park. Put about 40,000 yards of sand along here, and then starting at the WCIND lot about 140,000 yards heading south. If we need to go north, we can. What we'll do is we'll do profiles of summer and see how the profiles look up here. But we could extend that to the north our permanent fill limits or the entire shoreline. And so, if we need to extend those limits, we can do that. That'll be based on the summer profiles we do this summer.

Q. [Unknown Speaker] Okay, so you're just gonna then bring it back up to what they were before(?).

A. [Michael] That's the goal. That those are showing deficits. We're just gonna bring those numbers right back up. That is correct.

[Unknown Speaker] Okay. Perfect.

[Michael] So, lots of hands. So, we'll go here and then we'll go to the back.

Q. [Unknown Speaker] Yeah, just a quick question. I saw that on Manasota Key you're going to be trucking in sand.

[Michael] Yes.

Are there any restrictions or criteria that have to be met for the sand that's coming in as opposed to sand that's dredged in, that's kind of existing Gulf sand?

A. [Michael] So yes, so the upland sand lines have a very strict set of criteria that they have to meet. It's in state statute, and then we also modify it to be based on as close to the beach as we have now. No upland sand line can produce exactly what we have but they can get close; they screen, they wash and so we've been very fortunate to be working with the local mines and other truck haul projects but it's always a small amount of sand. So, we placed 880,000 yards. And we're gonna only truck in 70,000. So, we're not gonna change the character of Manasota Key by trucking in 70,000 yards. If you were to do a complete truck haul project, say, you know 800,000 yards of truck sand, and you could then change the character. But it'll, it'll be very close in grade, size, and color. The only unfortunate thing is because they screen the material to get everything out of it. They also screen out the shell. So, we don't typically have a lot of shell coming in from the upland sand lines.

So, there was 2 questions in the way back.

Q. [Unknown Speaker] I live on the southernmost building of the resort.

[Michael] Okay.

The gulf seems very close to my building. So, have you done the surveys up that far north?

A. [Michael] We do. Yes, very much, and we survey the entire shoreline from all the way inside here, we go all the way down, and actually, we would go into the State Park a little bit. So, we will have surveys. We'll look at this summer, and if we need to put sand along these stretches to replace what the storms lost. We can do that.

[Unknown Speaker] Yeah, cause it kind of looks like some dune you know, vegetation is gone, and it's definitely closer to my house.

[Michael] Oh it's closer to everybody's house. You're in an area, though that has naturally accreted since 2003. This may be the first time we have to put sand there since then. Okay, thank you.

I think there was one more over here. Oh, go ahead Susanne.

Q. [Susanne] We have a Zoom participant who has a question. If you have a dune remaining in front of your house, are they going to add sand on top of that? We always add seagrass every year. Should we not do that for now?

A. So, we will try not to disturb existing healthy dunes. With that said there may be one or 2 properties that for whatever reason, the storm didn't take that away, and everything else next to it did. It's really hard to preserve little, small pockets, because

we're hydraulically replacing the sand. So, as much of existing vegetation, healthy dunes we can protect and maintain, we will. But if there's an isolated pocket here and there, there's a good chance, it won't get covered and have to get replanted. And we'll replant to dune plants over that area so they that they come back. And sometimes we've covered dune plants, and they're resilient. And they come right up through the sand and survive.

So yeah, question over here, I believe, in the front chair.

Yes, ma'am.

Q. [Unknown Speaker] Is the parking maps available online as well?

A. They haven't been posted yet, but they will be, right Matt. You'll post all that stuff sometime later this week. They'll get posted.

Q. So, if homeowners have encroached to the parking places, will those encroachments be removed? What was parking to make the parking whole?

A. [Matt] I'm the guy that comes out here, and I know that there's new construction. They've planted palm trees and old parking spots every year I come out here, and it's and I try to do. If a spot's missing over here, maybe I can pick it up down the road. I'm never looking to try and add, parking that that we don't meet. We need to meet a certain criterion, and I'm trying to find; make sure that we meet that criteria. So, like, Mike said. We need, we need something like 20, 21 to 25 parking spots per access. That's what I'm looking to find. If it's been taken. I'm not gonna come and remove someone's \$10,000 Palm tree to put in a public parking spot. What I'm gonna do is say, oh, that parcel over there that hasn't been built on. We could, we could put it there for now. In 10 years, 15 years, 20 years we may have a different problem where the island's built out, and nobody wants any parking. But then we're gonna have to address it as, Are you guys willing to completely fund the beach project rather than have this in front of your house?

Q. [Unknown Speaker] What's that doing by you not enforcing what's there now is encouraging every homeowner to plant out there the way they want, and that's creeping up. I know you've seen it.

A. [Matt] I mean every time I've broached the topic with my boss, and I've talked to, you know. I know there has been many discussions within the county about how to address it. Right now, we're not enforcing. We're not strictly enforcing that, and I think it's right now, it's been the path of least resistance. It may not always take that course. But, um.

[Guest Speaker] I will just ask you reconsider your decision.

[Matt] Okay, I will. I will bring that. I'm, just the guy on the ground. I don't make policy.

[Unknown Speaker] So, can we put some signage up somewhere say, marking the boundary?

[Matt] Well, when they're clearly identified, it's pretty obvious, because there is a shell bed that they place out there. Unfortunately,

[unknown speaker: some people need a sign]

[Matt] yea, some people.

[Unknown Speaker] Yeah.

[Matt] But I'll talk to, I'll talk to my boss [regarding] all these questions. I'll bring back to my boss.

[Michael] So, thank you. And one more question.

Q. How far does the restoration area go on the southern end of South Beach there? Like so many miles from Stump Pass? Or where does that end?

A. It would, it would, depending on again the profiles of summer, assuming that there's been no recovery, that would go right to the State Park Beach boundary in the North end. So basically to the south home before the State Park currently.

[Unknown Speaker] Okay.

Q. Besides sea oats, is there another type of plant that would be good to add to the dunes you know, if we're trying to add some plants?

A. [Michael] Sure. We typically do like a 70% CO, and then we add 2 other species depends on what the nurseries have available. We'll give them the list of approved plants, and they could come in and put in like 15% sea purslane, you can put in the beach elder. There's like 4 or 5 or 6 different plants that are pretty popular down here, and so we again, kind of have like 70% CO, it's in either of 2 species, to populate it. But if you have input into that, we're open to suggestions. Obviously, there's this whole program today with the [Bocilla Island] Conservancy. If there is a certain type of plant that's an approved plant that you guys would like to see added in greater abundance than others, well we're open to that input. Let us know.

Q. Where can we find the list of those plants?

A. The State of Florida has, you know, a list of native dune plants, and so we just usually go to the Coastal Construction control line permitting process. And like, I said, there's a good 6, 8, 10 different types of plants that are very popular and typically used. So, yeah.

Yes, ma'am.

Q. [Unknown Speaker] You know the WCIND lot on Knight Island that eroded, so terribly before, for maybe a year, looking so bad. But what do you think caused that? It's huge.

A. [Michael] Sure, I believe that it's the wave refraction patterns around Stump Pass. And so, as I mentioned, this whole area has been accretional on the very north end and very stable and that's the WCIND lots right there. And so, we have a big shoal complex. When we dredged the pass in 2003, we broke through the sand spit that had grown 1,400 feet along the beach. That sand was released and welded on to this part of the shoreline. And I, for those of you that were here in 2003, I said someday, we're going to have to put sand back in this area because that sand supply will stop. And then erosion will start again.

So Matt, go to the next slide. I think it's the next one with the erosion control line on the north end. Sorry. Keep going. Keep going. Sorry. Not the next. Yeah. Keep going. It's the aerial that shows the north end one more, so again for the historians in the room.

A (Continued) Those of you remember Bob Pierce. He was a champion. He put geotubes in front of these properties to protect them in 1994. [I think they were] So, they all have seawalls. Some of you may own this, and don't even know you have a seawall in front of your property. So, I never want to see those seawalls again. I know you don't want to ever see them again, but some day Mother Nature will return. And so when the waves refract around the shoal, they focus energy down here and we'll start to cause erosion. So that's probably what happened. That storm that caused that, focused the energy into that one location.

Yes, Linda.

Q. [Linda] That particular lot has been, that you text us, has got a lot lower than the dunes, would that have exasperated that erosion at that one particular point?

A. Yea, yea, it could, it could have.

Q. [Unknown Speaker] So, is there any thought of building up the difference a little bit higher where there are accesses?

A. So, when they would get worn down, you don't have that wind tunnel. And we've talked about some resiliency planning in our approach. So, if the dune has gotten wiped out and going higher makes sense. But if it's if it's still very intact, and we go higher, then we could be smothering existing plants. So it's a tradeoff, do we rebuild it higher now, knowing that the plants will have to reestablish? And so we could actually build it a little wider, maybe. And that reserve of sand would then be there.

[Susanne] So, any other questions? [none]

Thank you.

And thank you. Thank you everyone for coming, and we will have some articles and follow up postings for anyone who's interested as well as they mentioned, they will be on the county website.