

# Appendix D:

## Public Comments and Responses

Appendix D1: Public Comments and Responses  
Summary

Appendix D2: BMP Draft Comments

Appendix D3: Public Hearing Comments

Appendix D4: Public Hearing Notice

# Appendix D1:

## Public Comments and Responses

### Summary

Summary of Comments from BMP Draft					
Comment ID#	Commentor	Location of Comment	Appendix D Page #	Comment	Response
1	Dara Royal	BMP Draft	D-11	Does the annual survey occur the same time each year? If so, when? If in the spring, then plan submission is premature before next annual survey which would account for initial adjustment of FEMA Phase II Dune Project and impacts of Hurricane Ian and 2022/23 winter storms.	Included Table of Historical Surveys in Section 3, but yes the surveys occur each spring. The Beach Management Plan is based on data available at the time and is updated every 5 years to account for changes.
2	Dara Royal	BMP Draft	D-11	Named storm events? Tropical storms and hurricanes? Winter storm events (southwesters) can be large. Are these winter storms accounted for as background erosion reflected in the annual surveys?	Included Table of Historical Surveys in Section 3, but yes winter storms are accounted for in background erosion documented in the Oak Island Beach and Inlet Management Plan (OIBIMP).
3	Dara Royal	BMP Draft	D-11	How soon should nourishment event occur once the trigger volume is reached? Within one year? Two years? What if trigger volumes occur in different reaches at different times? What would the minimum volume of the nourishment be for each reach once the trigger volume occurs?	Comment Noted. This will be determined as part of permitting for the OIBIMP. It is expected that multiple reaches would have to reach trigger volume so cost-effective projects would take place.
4	Dara Royal	BMP Draft	D-11	Please also provide street locations for stations as in previous presentations.	Executive Summary Rewritten, All similar tables in the report include street locations
5	Dara Royal	BMP Draft	D-11	Do the 2022 volumes for Central, West, and West End Reaches include FEMA Phase II Dune Project?	Included Table of Historical Surveys in Section 3, but yes they do.
6	Dara Royal	BMP Draft	D-11	Will the plan with 10-year LoP qualify as a FEMA Engineered Beach? If so, when? After the 2024/2025 project?	Comment Noted. This will be a Town decision and dependent on the condition of the beach at the time of the decision, but no FEMA Engineered Beach designation could occur until after the 2024/2025 project.
7	Dara Royal	BMP Draft	D-12	Will this project nourish the entire shoreline? If so, will this require 2 dredging cycles (seasons)?	Comment Noted. At this time the project is expected to nourish the entire shoreline and can be accomplished in one dredge season. Depending on what happens to the beach between now and then, the project limits may change as part of the Town's decision for the OIBIMP.
8	Dara Royal	BMP Draft	D-12	What is the timeline to obtain the permit for sand for the 2024/2025 project? Where is the borrow area?	Addition explanation given in 4.2.1
9	Dara Royal	BMP Draft	D-12	Clarify terms potential/available. Does this mean worth investing in additional vibracore samples beyond Fall 2022? Further archeological and environmental analyses? There are no permits in hand to mine any of these sources.	Comment Noted. To be determined as part of OIBIMP.
10	Dara Royal	BMP Draft	D-12	Plan submission premature before the results of Fall 2022 vibracore samples are analyzed. Actually, plan submission is premature before obtaining permit for sand from Fryin Pan Shoals because without it the volume needs are not available for 30-year maintenance.	Comment Noted. This BMP is updated every 5 years to be sure that it is following the OIBIMP. If conditions change and the Town chooses not to follow or adjust the OIBIMP, this BMP can also be adjusted at that time.
11	Dara Royal	BMP Draft	D-12	Is sand in the Jaybird Shoals area available for the 2024/2025 project?	Comment Noted; expanded current explanation in Section 6.5
12	Dara Royal	BMP Draft	D-12	Is this based on the SMP for the channel? If so, what is the term and schedule of the SMP? If not, what is the basis?	Comment Noted, but yes the current USACE SMP and it was assumed that past volumes and timings received would be again.
13	Dara Royal	BMP Draft	D-12	Are all these areas and constraints identified and explained in the body of the plan?	Comment Noted, More details provided in OIBIMP.
14	Dara Royal	BMP Draft	D-12	Covid-19 provided a unique windfall to the accommodations fund. Unrealistic to expect this to continue through recession and continued inflation.	Comment Noted. Funding mechanism for OIBIMP can be revised if Town desires and again why this Beach Management Plan is updated every 5 years. Funding plan also does not assume this growth rate to continue.
15	Dara Royal	BMP Draft	D-12	Will the amount of Sand Tax collected continue to double every 5 years?	Comment Noted. See comment #14 response.
16	Dara Royal	BMP Draft	D-12	Using general fund reserve is equivalent to an increase in the Sand Tax. Why not include this amount in the forecast rise in Sand Tax Fund?	Comment Noted. Town decision on where funds come from.
17	Dara Royal	BMP Draft	D-12	Non-beach infrastructure and service needs will continue to go unmet and degrade if taxes and general fund reserves continue to be diverted to beach nourishment	Comment Noted. Town decision on where funds come from and how rates may need to be adjusted in future to meet needs depending on growth patterns which should also increase revenues.

Summary of Comments from BMP Draft					
Comment ID#	Commentor	Location of Comment	Appendix D Page #	Comment	Response
18	Dara Royal	BMP Draft	D-13	You just told the state that you don't need any more state funding for beach nourishment for 30 years! (\$20 M state grant is one time only for 2024/25 project) Didn't voters reject paying for beach nourishment with only local funds on a 6-year cycle and reject increases in townwide sand tax in November 2021? Do cost estimates accurately reflect the additional cost of mining sand the additional distance from Frying Pan Shoals over 2 dredging cycles (seasons) with 2 mobilizations?	Comment Noted. The maintenance events are also expected to be completed in one season. Past projects with the Town have been completed in 6-8 week timeframes once the dredge(s) are here.
19	Dara Royal	BMP Draft	D-13	Appendix A, B, and C have not been made available to the public for review and comment. Why is there no appendix for the 2024/2025 project?	Appendix A, B, and C will be made available. 2024/2025 Project is in the design stages and not documents are available to include at this time.
20	Dara Royal	BMP Draft	D-14	Does Appendix A show a 60-foot setback line from the seaward top of the FEMA Phase I&II dune projects for oceanfront lots? If no, please add.	Comment Noted. These are the original construction drawings shown for documentation as required by NC CRC.
21	Dara Royal	BMP Draft	D-14	Does Appendix C include a 60-foot setback line from the pre-project line and the 15-foot setback from the street-side property line for oceanfront lots? If not, please add these lines.	Comment Noted, but not required by DCM for this Beach Management Plan
22	Dara Royal	BMP Draft	D-16	The Town's large-scale nourishment project was in 2001-2002	Updated Text
23	Dara Royal	BMP Draft	D-16	This statement is bogus on its face. If home is destroyed or damaged 50% in a storm there's not going to be a vegetation line that meets the 60-foot setback without future nourishment to re-establish it.. Main purpose was to jump start real estate sales of oceanfront property that had come to a screeching halt and rebuild on lots where homes were destroyed by Floyd in 1999 or build on vacant lots that didn't get built before 1985 in the Sea Turtle Project area that still had enough vegetation to meet the 60-foot setback. 36 new homes built in this area under the Development Line from 2017 to 2021.	Comment Noted and statement deleted
24	Dara Royal	BMP Draft	D-16	Good! Should never have been an option without long-term commitment to beach nourishment.	Comment Noted
25	Dara Royal	BMP Draft	D-16	Unbuildable lots have been the norm for most of the Town of Oak Island oceanfront lots since CAMA setbacks and erosion rates were put in place and enforced.	Comment Noted
26	Dara Royal	BMP Draft	D-16	When will the EIS for Frying Pan Shoals be completed?	Comment Noted. EIS for OIBIMP is to be completed in 2024.
27	Dara Royal	BMP Draft	D-16	Strongly disagree. There are no permits for sand from Frying Pan Shoals which will be the primary source for the 30-year maintenance and perhaps the only source for the 2024/2025 project.	Comment Noted, More Details provided in OIBIMP.
28	Dara Royal	BMP Draft	D-16	If approved in the next 6 to 18 months will allow property owner's (mostly investors) to use what's left of the existing FLSNV established by the FEMA Dune Projects after Hurricane Ian (and any subsequent storms) to build on vacant lots or tear down old, smaller houses to build new, larger houses again without sand permits for future beach nourishment. No different than operating under the Development Line for all practical purposes.	Comment Noted.
29	Dara Royal	BMP Draft	D-17	Have you compared 2012 USACE quantities for 30 years (instead of 50 years) to proposed quantities for BMP while accounting for differences in design template and LoP? Up until 2007 the USACE used Jaybird Shoals as the primary borrow area in the GRR but adverse impacts of using Jaybird required the switch to Frying Pan which dramatically increased the cost and required two dredging cycles (seasons) for initial project construction and each renourishment cycle.	Comment Noted, More Details Provided in OIBIMP.
30	Dara Royal	BMP Draft	D-17	Cost benefit ratio was .7 in 2012 draft GRR without recreation benefits which cannot be more than 50%. Didn't meet federal funding criteria at the time of at least 3.0 cost benefit ratio.	Comment Noted and text adjusted.
31	Dara Royal	BMP Draft	D-17	50-50 cost shared 3-year feasibility study to determine if it's in the federal government's financial interest to participate in future efforts to reduce risks.	Comment Noted.
32	Dara Royal	BMP Draft	D-18	Original SMP as described in next paragraph subject to revision in 20 years which is now. Is a revised SMP under consideration or has one already been approved? If so, what is it? If not, why not? Does performance of terminal groin on Bald Head justify 2/3 of sand going to Bald Head? The terminal groin was supposed to reduce the need for beach maintenance on Bald Head, so shouldn't more sand be available more often for Oak Island?	Comment Noted, Coordination Ongoing with USACE
33	Dara Royal	BMP Draft	D-18	The Corps is authorized to place sand as far as SE 58th under the SMP but the least cost disposal placed sand about half that distance in 2009 and the Town had to pay the delta cost to dispose of sand down to SE 58th in 2018.	Updated wording in Section 2.2
34	Dara Royal	BMP Draft	D-18	Maintenance event sediment disposal is least cost method without a design template which means it would not qualify as a FEMA Engineered Beach. But it has maintained the dunes that grew naturally from a 20 foot strip of sea oats planted on the most landwardportion of the flat berm in 2001, and it does provide a 10-year LoP and a vegetation line that meets oceanfront setbacks.	Comment Noted
35	Dara Royal	BMP Draft	D-18	Design template description is misleading. Berm after initial construction extended 250-300 feet in order to have a berm width of 70 feet after 10 years of erosion.	Comment Noted and text adjusted.
36	Dara Royal	BMP Draft	D-19	What is the sail distance from borrow area to placement site for State area? Federal Area?	Added sail distance, can be found in section 6.2
37	Dara Royal	BMP Draft	D-19	Table 9-3 and its inclusion in the Executive Summary should state that these quantities are reconnaissance level	Comment Noted. Updated Table 6.12 and 9.3 Title
38	Dara Royal	BMP Draft	D-19	Will investigations include identifying ship wrecks?	Comment Noted, Addressed in OIBIMP
39	Dara Royal	BMP Draft	D-19	Plan submission premature before the results of Fall 2022 vibracore samples are analyzed.	Comment Noted. Plan can be adjusted in future.
40	Dara Royal	BMP Draft	D-19	These refined volume estimates should be added as a separate column to Table 9-3, and its inclusion in the Executive Summary.	Comment Noted. See Comment #37 response.
41	Dara Royal	BMP Draft	D-19	Why wasn't sail distance given for Frying Pan Shoals	Added sail distance, can be found in section 6.2
42	Dara Royal	BMP Draft	D-19	Plan submission premature before results of Fall 2022 vibracore samples are analyzed.	Comment Noted. Plan can be adjusted in future.

### Summary of Comments from BMP Draft

Comment ID#	Commentor	Location of Comment	Appendix D Page #	Comment	Response
43	Dara Royal	BMP Draft	D-19	Reconnaissance or refined level estimate?	Comment Noted. See Comment #37 response.
44	Dara Royal	BMP Draft	D-19	Plan submission premature before results of Fall 2022 vibracore samples are analyzed.	Comment Noted. Plan can be adjusted in future.
45	Dara Royal	BMP Draft	D-19	Reconnaissance or refined level estimate?	Comment Noted. See Comment #37 response.
46	Dara Royal	BMP Draft	D-20	Use of the USACE shallow draft hopper dredge built for this purpose should be reinstated	Comment Noted
47	Dara Royal	BMP Draft	D-20	Adamantly opposed to deepening the channel	Comment Noted
48	Dara Royal	BMP Draft	D-20	The primary purpose was Habitat Restoration, not channel navigation maintenance	Updated Text, can be found in section 6.4
49	Dara Royal	BMP Draft	D-20	This is the amount that should appear in a separate refined column to Table 9-3 and its inclusion in the Executive Summary with a note that this material is placed from Station 650+00 to 680+00 the western third of West End trigger volumes.	Comment Noted about Refined Volume, Executive Summary rewritten, Updated Text regarding material placement, can be found in section 6.4, More Details provided in OIBIMP
50	Dara Royal	BMP Draft	D-21	Reconnaissance level column Table 9-3 and its inclusion in the Executive Summary.	Comment Noted. See Comment #37 response.
51	Dara Royal	BMP Draft	D-21	$765K + 816K = 1.581K?$	Volume noted in text referred to Dredged Volume. Delete "and placed", section 6.5
52	Dara Royal	BMP Draft	D-21	Does this mean that the sand source for the 2024/2025 project will be Frying Pan Shoals given the limited quantities "available" from the ODMDS?	Added Text for Explanation, found in section 4.2.1
53	Dara Royal	BMP Draft	D-21	Reconnaissance level column Table 9-3 and its inclusion in the Executive Summary with a note that no vibracore samples have been taken to determine sediment compatibility.	Comment Noted. See Comment #37 response.
54	Dara Royal	BMP Draft	D-21	2001 Sea Turtle Habitat Restoration Project. There was no rock in the Corps vibracores for the project.	Comment Noted and text adjusted.
55	Dara Royal	BMP Draft	D-21	Are these areas being investigated to supplement typical SMP quantities? Plan submission premature before the results of Fall 2022 vibracore samples are analyzed.	Comment Noted, More Details provided in OIBIMP
56	Dara Royal	BMP Draft	D-21	Depends on expired Sand Management Plan (see Section 2.2). Should not be included in Table 9-3 until revised SMP is approved.	Comment Noted. Plan can be adjusted in future.
57	Dara Royal	BMP Draft	D-21	Could also happen with "available" ODMDS borrow areas	Comment Noted. Plan can be adjusted in future.
58	Dara Royal	BMP Draft	D-22	Plan submission premature before the results of Fall 2022 vibracore samples are analyzed for Frying Pan Shoals and ODMDS.	Comment Noted. Plan can be adjusted in future.
59	Dara Royal	BMP Draft	D-22	Refined 10 Mcy	Comment Noted. See Comment #37 response.
60	Dara Royal	BMP Draft	D-22	Refined 3 Mcy	Comment Noted. See Comment #37 response.
61	Dara Royal	BMP Draft	D-22	Could be abandoned like Central Reach	Comment Noted. Plan can be adjusted in future.
62	Dara Royal	BMP Draft	D-22	Could be abandoned like Central Reach	Comment Noted. Plan can be adjusted in future.
63	Dara Royal	BMP Draft	D-22	Bird in hand is the 2.1 Mcy placed from Section 650+00 to 680+00 in the western third of West End trigger volumes.	Comment Noted
64	Dara Royal	BMP Draft	D-22	No vibracores samples have been taken to determine sediment compatibility	Comment Noted, More Details provided in OIBIMP.
65	Dara Royal	BMP Draft	D-22	Should not be included until revised SMP is approved	Comment Noted. Plan can be adjusted in future for any revised SMP.
66	Dara Royal	BMP Draft	D-22	Too optimistic?	Comment Noted. Plan can be adjusted in future.
67	Dara Royal	BMP Draft	D-22	Besides LFIC - Which borrow areas? Which areas of the island? What constraints?	Comment Noted, More Details provided in OIBIMP

### Summary of Comments from Public Hearing

Comment ID#	Commentor	Location of Comment	Appendix D Page #	Comment	Response
68	Terri Cartner	BMP Public Hearing	D-25	Ms. Cartner thanked Council members for their due diligence in working through this process, saying it was a complicated plan, very complicated for those who were not sand engineers. She said that this was a huge decision for the Town, and that with the Plan being presented last week and having Public Hearing tonight with a motion on the agenda, she was concerned that it was too rushed.	Comment noted, timeline will be addressed in Executive Summary
69	Terri Cartner	BMP Public Hearing	D-25	She said that the citizens needed to hear more about this issue, and in layman's terms. Ms. Cartner said she hoped Council would take the time to get that information out there in a way that taxpayers and citizens could understand so they understood the real implications if the Plan is adopted.	Comment Noted
70	Ann Schading	BMP Public Hearing	D-25	Ms. Schading said that this was complicated, and that she had tried to read the document, but she was not an engineer/ She said she had been volunteering to help citizens understand it once she does.	Executive Summary re-written to be less technical
71	Ann Schading	BMP Public Hearing	D-25	She said she didn't think there was a hurry and that they need to take as much time necessary to do this.	Noted, timeline will be addressed in Executive Summary
72	Ann Schading	BMP Public Hearing	D-25	She said that she wanted to make sure they had a common goal, and she wasn't sure if that was the tourists, the front row of houses, or the beautiful beach. She said that she hoped Council had a clear goal to keep in mind as the process proceeds.	Comment Noted
73	David Bodenheimer	BMP Public Hearing	D-25	Mr. Bodenheimer said the Beach Management Plan was too hasty, too risky and too costly. He said Moffatt & Nichol presented the plan last week, which did not give enough time for due diligence. He asked what the rush was. Mr. Bodenheimer said that nowhere in the written record did it show a dire emergency that required a quick vote.	Noted, timeline will be addressed in report. Also, rename master beach nourishment plan to clarify difference
74	David Bodenheimer	BMP Public Hearing	D-25	Mr. Bodenheimer said his written comments noted three risks – the risk of partnering with the Coastal Resources Commission (CRC), facts that are unknown and unexplored, and legal questions that are not asked or answered. Mr. Bodenheimer said that the Town was in this mess because the CRC said no in 2016 and yes this year. He said the Supreme Court says when an agency flips like that, it was classic arbitrary and capricious conduct.	Discussion of BMP process from 1998, 2016 development line, and now BMP provided in Section 4.3
75	David Bodenheimer	BMP Public Hearing	D-25, D-26	He asked if the Town made a 30-year commitment, would CRC renege on that commitment. Mr. Bodenheimer said that the Plan was to cost \$140 million over 30 years. He said that there were three cost factors to consider. First, you can't buy a 30-year Plan without a price tag. He said the cost had to be nailed down before Council could make a rational decision on this issue. He said the cost would be much higher than the \$140 million; he said previous estimates did not include 8 percent inflation.	CRC evaluates how coastal development is regulated statewide and updates policy accordingly. The CRC has implemented the BMP process to provide community with improved flexibility for the Town to oversee how coastal development is maintained. Renewal of BMP is addressed every 5 years as noted in Executive Summary
76	Dena Thomason	BMP Public Hearing	D-26	Ms. Thomason said she and her husband were excited to be moving here soon. She said her family fully supports the Beach Management Plan. She said that this beach had been very good to them, in intangible and some easily quantifiable ways. As Oak Island has become a more sought-after destination, the number of days their houses have been rented has increased, along with the rental fees. She said her brother has a thriving business on Oak Island, which becomes more profitable each year. She said without a properly nourished beach, all those successes could be easily erased. Ms. Thomason said a wise man had once told her that if you say no to something, you're actually saying yes to something else. She said that by saying no to this Beach Management Plan, they were saying yes to accepting an eroding beach that will eventually be unusable. They would be saying yes to decreased property values which would lead to increases in property taxes. They were saying yes to a majority of the rental revenue on the island, to viable businesses being forced to close, and to eventually having a beach that you can't even walk down unobstructed. Ms. Thomason said they were more than happy to pay their fair share to protect our beautiful beach and to ensure a promising future for Oak Island, their new home.	Comment Noted
77	Bob Greene	BMP Public Hearing	D-26	Mr. Greene said he had read and re-read the Plan and he still wasn't sure what he was reading. He said that this had been kicked around for a while. He said that that the Town would be buying something and that Council didn't really know what we were buying.	Comment Noted
78	Bob Greene	BMP Public Hearing	D-26	He said that someone, somewhere, should be doing an "if, then" analysis. Mr. Greene said he would be the first person to say we need to protect the beach and that he had to pay more, he would pay more, but an analysis should be done – if we do this, the cost is this and if we don't do this, here is what the consequences could be. He said that maybe they have to buy the entire package, and if so, then buy it, but not to do it just because the engineers say you have to.	Noted, this analysis is being conducted as part of the EIS process. Updated text in Section 4.1

### Summary of Comments from Public Hearing

Comment ID#	Commentor	Location of Comment	Appendix D Page #	Comment	Response
79	Dara Royal	BMP Public Hearing	D-26, D-27	<p>On the morning of October 3rd, I submitted via email to the Town Clerk, Mayor and Town Council, Town Manager and Finance Director, Development Services Director, Planner, and Attorney written public comments on the draft Beach Management Plan in the form of a pdf file of a 54-slide PowerPoint presentation of the History of Oceanfront Development and Potential Impacts of Granting a Pre-project Line Exception along with a pdf file of an 18-page Word document with 121 comments on 18 Sections or Subsections of the draft Beach Management Plan. I respectfully requested submission of both of these files with the Town's application for approval of the Beach Management Plan per 15A NCAC 07J .1201 (e). Key points to consider from these documents:</p> <p>Each of the 8 potential areas listed as available sediment sources carry significant limitations for permitting. Plan submission is premature before the results of Fall 2022 vibracore samples are analyzed for Frying Pan Shoals, ODMDS, and Wilmington Harbor Channel. Plan submission is premature before permits are obtained to dredge sand from Frying Pan Shoals. Sand volume needs are not available for the 6-year cycle maintenance events over the 30-year life of the plan without Frying Pan Shoals. Sand volume needs may not be available for the 2024/2025 advance fill project without Frying Pan Shoals. Cost estimates for the 2024/2025 advance fill project and subsequent maintenance events may not adequately reflect the cost of mining sand the additional distance from Frying Pan Shoals over 2 dredging. Cost estimate for a 6-year maintenance event does not include the volume needed to replace sandlost during storm events (780,000 cy x \$18.75 per cy = \$14,625,000). Covid-19 provided a unique windfall to the accommodations tax fund. It is unrealistic to expect this trend to continue through a recession and sustained inflation. The Financial plan includes an 87.5% increase in the amount of Sand Tax collected by 2028. The Financial Plan anticipates that \$1 million per year could be set aside for beach nourishment funding from General Fund reserves based on recent history. It is unrealistic to expect this trend to continue through recession and sustained inflation. Using General Fund reserves is equivalent to an increase in the Sand Tax. Non-beach infrastructure and service needs will continue to go unmet and degrade if taxes and general fund reserves continue to be diverted to beach nourishment. The Financial Plan does not include any additional state funding for the 6-year cycle maintenance events over the 30-year life of the plan. Voters rejected paying for beach nourishment with only local funds on a 6-year cycle and rejected increases in the town wide Sand Tax during the most recent election cycle in 2021. Unbuildable lots and non-conforming structures have been the norm on the oceanfront for most of the Town of Oak Island since CAMA setbacks and erosion rates were put in place and enforced. The vegetation on the FEMA Phase I &amp; II Dune Projects could make lots buildable from SE 58th Street to the end of W. Beach Drive if a pre-project line exception is granted. 253 structures built before 1994 with less than 1500 heated square feet are at risk of being torn down and replaced by larger structures if a pre-project line exception is granted. The Town does not yet have permits for sand for the 2024/2025 advance fill beach nourishment project or subsequent maintenance events. Approval of a Beach Management Plan with a pre-project line exception in the next 6 to 18 months would be no different from continuing to operate under the Development Line rules repealed by the CRC for all practical purposes.</p> <p>Therefore, I respectfully request that you vote against approving the Beach Management Plan. Either way, I also respectfully request a written response to my comments on the Beach Management Plan.</p>	All comments made have been noted. These comments are similar in nature to what was expressed from the comments made in the BMP Draft.
80	Durrall Gilbert	BMP Public Hearing	D-27	<p>Mr. Gilbert said that he knew this was a hard decision, and that he had been speaking with beachfront property owners. He said that they understand this is a tough decision, but they want to stress that the beach is for everyone. He said he knew there was a perspective that because they are on the beach, they should be responsible for the nourishment. He said that they do understand the responsibility they, as property owners, have to maintain the beach, but that the beach is for everyone. Mr. Gilbert said he spoke at a recent meeting about his plans to build a house on his property. He said that he had CAMA representatives visit his property, and that his lot is not buildable. Mr. Gilbert said that the number he heard was that 80 percent of the oceanfront properties were affected. He asked why property owners weren't told about the change from the CRC. He also asked if money lenders would issue loans for properties that were not buildable. He also said that he wondered about paying the tax bill when the property was not buildable. Mr. Gilbert said he hoped that they would look at maintaining the beach not just for the beachfront owners but for the entire community, the businesses, the tourism, and all that is generated by it. He said that while this beach nourishment plan may not be perfect, it goes a long way toward addressing the maintenance, which quite candidly, isn't that the responsibility of the Town?</p>	Comment Noted
81	Melanie Morgan	BMP Public Hearing	D-28	<p>I was very happy with how our dune protected our homes, road, water, sewer and power lines in the hurricane. Even though the sea oats were still so small, their roots had really grown! I know we lost a lot but the dunes did their job. I want to tell you all again that I learned from helping a buyer that wasn't sold on Oak Island, how awesome our town is. I grew up here and didn't even realize how special this place is until I started looking at other beach towns. We have many assets that other towns do not. Trees. When you drive across either of our bridges, you see green. Beautiful trees. Other islands you only see rooftops. TWO bridges! We have two ways to get on and off our island, which helps with traffic and also provides multiple evacuation routes. No one else around has two bridges. X zone. Land with little flood risk that can be built on without requiring flood insurance. Do you realize that all the other Brunswick County islands do not have any X zone? This is one reason why our island has seen such a boom in development. People can live here without worrying about their house flooding, or having to pay high flood insurance premiums. The X zone is also a reason we have 2 grocery stores on our island. Some people say they don't want chain stores here. Let me tell you, when you live here, year after year, you realize how lucky we are to have conveniences. Food Lion, Publix, Dollar General, Thomas Drugs, Oak Island Hardware... these are assets to our community. The Jetport is also an asset. This brings a lot of investment to our area, and likely other benefits such as people with knowledge and specialized training. - Water and sewer. The other beaches still require a septic system. Which requires land space, which requires trees to be removed...Underground power lines. Many other beaches still do not have it. Besides it being ugly to have power lines everywhere above ground, we hardly ever lose power here. Major asset! We have many town owned assets, like the piers, boat ramps, many parks including Middleton Park with the stage for concerts, the splash pad and playground, the rec center which is getting a makeover, the tennis and pickleball courts, the ball fields, the 801 Center, the skate park... More public beach access parking spaces than anyone else. Our beach is accessible. Where I am going with this, is that we are the cream of the crop with Brunswick County beaches.</p>	Comment Noted

### Summary of Comments from Public Hearing

Comment ID#	Commentor	Location of Comment	Appendix D Page #	Comment	Response
82	Melanie Morgan	BMP Public Hearing	D-28	Where I am going with this, is that we are the cream of the crop with Brunswick County beaches. We have really got it going on here. We cannot be all that, and also not support our beach itself. It's not just about oceanfront properties. It's about protecting our tax base and our infrastructure. Preventing the expense of having to clean up and repair damage after storms. And yes, preventing possible lives lost, like has happened in Florida. Also, if we allow homes (and infrastructure) to fall into the ocean, it creates an environmental hazard, and a safety hazard. All the assets I mentioned were made possible by investment from a strong tax base and strong leaders. There may be some expense to our property owners, but as I have said before, do not move to a coastal town and expect your taxes to be low. That is not a reasonable expectation. There is a reason people move here, and it's not the humidity and no see ums. We have a one time opportunity to get \$20 Million in help. It would be a huge mistake not to take advantage of that. The opportunity will not happen again.	Comment Noted
83	Nancy & Scott McMurray	BMP Public Hearing	D-28, D-29	Mayor White and City Council Members, We urge you to support a submission of a Beach Management Plan to CAMA for multiple reasons. The August 1, 2022 changes in the vegetation line have resulted in over 80% of our island's ocean front lots to be non-rebuildable unless the town has an approved beach management plan. This will result in a catastrophic financial hit to property owners, residents, and the entire island economy. No homes will be bought unless they are cash transactions because banks will not loan money to buy non-rebuildable property. Without a plan Oak Island will not be favorably looked upon when asking for grant money to assist maintaining our beach. If the beach is not maintained and homes are lost to erosion our town will lose the main financial engine; tourism. We understand that financial commitments can be substantial, but we are confident that by putting our minds and lobbying energies to work these commitments will be attainable. What you have done over the past year to find money to match the \$20 million grant from the state proves that resources can be found. We also believe that people who choose to live in a beach community all have a stake in the beach being maintained. There are obligations within every community to better it and support it.	Comment Noted
84	Jean Suther	BMP Public Hearing	D-29	1. Re: Beach Plan: Has a scientist even been hired to help with the imbalance of engineers steering this proposal and plan? Quote from the State Port Pilot - "BEACH PLAN Oak Island's \$40-million major beach project faces public scrutiny and possible council action at Tuesday's meeting." So the taxpayers will be on the hook for \$20-million dollars for this one time deal in order to acquire \$40-million. What's going to happen if we have more storms this year, we have 2 more months to go on this hurricane season - how close will we be to maxing out these funds?	Comment Noted
85	Jean Suther	BMP Public Hearing	D-29	2. Re: Paid Parking: Has the Town Lawyer, Brian Edes, given any explanation as to why he recommends that renters shouldn't be charged? Such a suggestion is ludicrous - they are the ones that crowd our beaches, it certainly isn't day-trippers that are parking here. We the people have a right to know why this absolution should be given to renters!! 3. Has everyone there at Town Hall forgotten that 2023 will be a new revaluation year? So whether you raise our tax rate or not - we will probably see a huge increase in our tax bills. For once I ask keep your tax payers in mind rather than every other plan, assessment or obligation you deem to pass on to us.	Noted. Not applicable to BMP. Town Council to address
86	Nelson & Diana Bareis	BMP Public Hearing	D-29	We urge the Town Council to move forward, and request approval of the Beach Management Plan (BMP) as provided by Moffatt & Nichol. The beach is an asset to the entire community, not just beachfront homes. No BMP, non-rebuildables would reduce their value by as much as 90% along with taxes. No BMP, beachfront homeowners will not be able to sell.	Comment Noted
87	Mayor Pro Tempore Bach	BMP Public Hearing	D-29	said that the Plan included completely unreliable data, that it was a forecast, and that it probably couldn't be validated. He said that Council needed to do the due diligence. He said he wanted to defer this item for 100 days to give Council time to analyze and review it and, if so desired by Council, to receive additional public comments.	Comment Noted

# Appendix D2:

## BMP Draft Comments

This document is a DRAFT, a working document subject to changes to be approved by Town Council.

**TOWN OF OAK ISLAND, NC  
BEACH MANAGEMENT PLAN  
DRAFT**

**September 30, 2022**



**Prepared by: Moffatt & Nichol**



**Prepared For: Town of Oak Island, NC**

## Executive Summary

The Town of Oak Island (Town) has developed this Beach Management Plan utilizing the criteria established in 15A NCAC 07J.1200. The Town is well in to developing a separate Oak Island Beach Management Plan (OIBMP). This plan was developed out of the Comprehensive Shoreline Management Plan (CSMP) (MN, 2016) which was finalized in 2016 as a pre-feasibility level study to improve the level of storm protection provided to the citizens and visitors of Oak Island. At the same time, the Town implemented the Oak Island Shoreline Mapping Program (OISMP) in 2016 which assess current and historical beach conditions utilized in the formation of strategies for future beach management efforts. This is accomplished through surveys performed annually and after large storm events to assess storm induced shoreline and volume change. This is a critical aspect of the OIBMP that will continue to be implemented throughout the life of the plan.

The data collected from the OISMP has allowed the Town to move forward with an in-depth analysis of its beach sand volume needs. This was accomplished through in-depth modeling efforts to quantify sand volume loss associated with the background erosion and storm induced erosion over the next 30-years. The OIBMP has developed volumetric nourishment triggers to identify when nourishment events should occur. Based on discussions with the Town, this beach management plan will maintain the 10-year LoP. Results from the most recent surveying efforts are shown in comparison with the 10-year LoP and 25-year LoP in the table below.

Reach	10-yr Level of Protection Trigger Volume (cy/ft)	25-yr Level of Protection Trigger Volume (cy/ft)	2022 Reach Average Volume (cy/ft)
Oak Island-East End 210+00 - 290+00	307	315	296
Oak Island-East 300+00 - 410+00	257	283	275
Oak Island-Central 420+00 - 500+00	235	244	252
Oak Island-West 510+00 - 590+00	231	242	263
Oak Island-West End 600+00 - 680+00	238	249	284

A project is expected to occur in 2024/2025 and future maintenance renourishment projects will take place every 6 years along the Oak Island Oceanfront. The total volume need also accounts for storm losses and sea level rise (SLR) projected over the next 30-years. The total volume need is summarized in the table below. Dredge operations that construct the nourishment projects require additional sand to be available. These projects implement dune planting to establish and maintain the vegetation to stabilize the entire dune system for the life of the plan.

**Commented [DR1]:** Does the annual survey occur the same time each year? If so, when? If in the spring, then plan submission is premature before next annual survey which would account for initial adjustment of FEMA Phase II Dune Project and impacts of Hurricane Ian and 2022/23 winter storms.

**Commented [DR2]:** Named storm events? Tropical storms and hurricanes? Winter storm events (southwesters) can be large. Are these winter storms accounted for as background erosion reflected in the annual surveys?

**Commented [DR3]:** How soon should nourishment event occur once the trigger volume is reached? Within one year? Two years? What if trigger volumes occur in different reaches at different times? What would the minimum volume of the nourishment be for each reach once the trigger volume occurs?

**Commented [DR4]:** Please also provide street locations for stations as in previous presentations.

**Commented [DR5]:** Do the 2022 volumes for Central, West, and West End Reaches include FEMA Phase II Dune Project?

**Commented [DR6]:** Will the plan with 10-year LoP qualify as a FEMA Engineered Beach? If so, when? After the 2024/2025 project?

This document is a DRAFT, a working document subject to changes to be approved by Town Council.

	30 Year Placed Volume Need (cy)	30 Year Dredge Volume Need (cy)
2024/2025 Project	1,650,000	2,145,000
Maintenance Projects (6-yr Cycle)	6,500,000	8,450,000
Storms	3,900,000	5,070,000
SLR	400,000	520,000
<b>TOTAL</b>	<b>12,450,000</b>	<b>16,185,000</b>

The Town has also undertaken an extensive sediment sampling program was implemented in 2019 to identify the native beach sediment characteristics and verify the compatibility and quantity of existing sediment sources adjacent to Oak Island. This effort determined the quantity and quality of potential sediment sources available for the next 30 years. Offshore sources consist of Frying Pan Shoals, which lies both within and outside of State waters), the Old and New ODMDS's, Lockwoods Folly Inlet Complex, Jay Bird Shoals, and Yellow Banks. Additional vibracore samples are being collected in the Fall of 2022 to refine the Frying Pan Shoals and ODMDS borrow areas. The total volume available within all available sources is approximately 99 Mcy as presented in the table below.

Area	Total Volume Over 30 -year Plan (cy)
Frying Pan Shoals - State	29,000,000
Frying Pan Shoals - Federal	58,000,000
Old ODMDS	1,000,000
New ODMDS	700,000
Lockwoods Folly Inlet Complex	4,502,000
Jaybird Shoals	NA
Yellow Banks	4,200,000
Wilmington Harbor Channel	1,600,000
<b>TOTAL</b>	<b>99,002,000</b>

Therefore, if all mentioned sources are incorporated the available material (99 Mcy) would more than meet the 30-year sediment need of approximately 16.2 Mcy which includes background erosion, storm erosion, and potential sea level rise. However, it must be noted that some of the borrow areas listed above (such as the Lockwoods Folly Inlet Complex) can only be used for certain areas of the island due to dredge plant constraints.

Through the Accommodations Fund the Town is planning to use 75% for beach nourishment and this equates to roughly \$3.3 - \$3.5M per year. The Town is assuming a 1% growth rate for this fund. The Sand Tax Fund equates to roughly \$1.6M currently but is forecast to rise to \$2.0M in 2024 and \$3.0M by 2028. The Town has built up a reserve in the general fund and anticipates that approximately \$1M per year could be set aside for beach nourishment funding if needed. The current funding on hand (with the \$20M State grant) and streams available to the Town are

**Commented [DR7]:** Will this project nourish the entire shoreline? If so, will this require 2 dredging cycles (seasons)?

**Commented [DR8]:** What is the timeline to obtain the permit for sand for the 2024/2025 project? Where is the borrow area?

**Commented [DR9]:** Clarify terms potential/available. Does this mean worth investing in additional vibracore samples beyond Fall 2022? Further archeological and environmental analyses?

There are no permits in hand to mine any of these sources.

**Commented [DR10]:** Plan submission premature before the results of Fall 2022 vibracore samples are analyzed. Actually, plan submission is premature before obtaining permit for sand from Frying Pan Shoals because without it the volume needs are not available for 30-year maintenance.

**Commented [DR11]:** Is sand in the Jaybird Shoals area available for the 2024/2025 project?

**Commented [DR12]:** Is this based on the SMP for the channel? If so, what is the term and schedule of the SMP? If not, what is the basis?

**Commented [DR13]:** Are all these areas and constraints identified and explained in the body of the plan?

**Commented [DR14]:** Covid-19 provided a unique windfall to the accommodations fund. Unrealistic to expect this to continue through recession and continued inflation.

**Commented [DR15]:** Will the amount of Sand Tax collected continue to double every 5 years?

**Commented [DR16]:** Using general fund reserve is equivalent to an increase in the Sand Tax. Why not include this amount in the forecast rise in Sand Tax Fund?

**Commented [DR17]:** Non-beach infrastructure and service needs will continue to go unmet and degrade if taxes and general fund reserves continue to be diverted to beach nourishment.

This document is a DRAFT, a working document subject to changes to be approved by Town Council.

adequate for the 2024/2025 Renourishment Project as well as providing and maintaining the 10-year LoP as set by this plan.

The Town held a public information and comment session on October 4, 2022, where comments were recorded and have been included in Appendix D in accordance with 15A NCAC 07J 1201(e). ADDITIONAL INFORMATION TO BE PLACED HERE AFTER THE PUBLIC COMMENTS.

**Commented [DR18]:** You just told the state that you don't need any more state funding for beach nourishment for 30 years! (\$20 M state grant is one time only for 2024/25 project)

Didn't voters reject paying for beach nourishment with only local funds on a 6-year cycle and reject increases in townwide sand tax in November 2021?

Do cost estimates accurately reflect the additional cost of mining sand and the additional distance from Frying Pan Shoals over 2 dredging cycles (seasons) with 2 mobilizations?

**Commented [DR19]:** Appendix A, B, and C have not been made available to the public for review and comment. Why is there no appendix for the 2024/2025 project?

## Table of Contents

1.0	PURPOSE .....	1
2.0	PROJECT BACKGROUND AND SUMMARY OF PREVIOUS PROJECTS .....	1
2.1	<i>Brunswick County Beaches CSDR</i> .....	2
2.2	<i>Wilmington Harbor Sand Management Plan</i> .....	3
2.3	<i>2001 Sea Turtle Habitat Restoration</i> .....	4
2.4	<i>Lockwoods Folly Inlet, the AIWW crossing and Eastern Channel Navigation Initiatives</i> ....	5
2.5	<i>FEMA Hurricane Matthew Emergency Dune Project</i> .....	7
2.6	<i>2020/2021 Beach Renourishment Project</i> .....	8
2.7	<i>2021/2022 Beach Renourishment Project</i> .....	13
3.0	OAK ISLAND SHORELINE MAPPING (MONITORING) PROGRAM .....	19
4.0	OAK ISLAND BEACH MANAGEMENT PLAN .....	21
4.1	<i>Design</i> .....	21
4.2	<i>Construction</i> .....	25
4.2.1	Proposed 2024/2025 Beach Renourishment Project .....	25
4.3	<i>Pre-Project Vegetation Line</i> .....	25
4.3.1	Current Pre-Project Vegetation Line .....	25
4.3.2	Establishment of Oak Island Beach Management Plan Vegetation Line .....	28
5.0	PROJECT PERFORMANCE .....	28
6.0	PLANNED BORROW AREAS .....	29
6.1	<i>Native Beach</i> .....	31
6.2	<i>Frying Pan Shoals</i> .....	34
6.3	<i>Wilmington Harbor ODMDS</i> .....	36
6.3.1	Old ODMDS .....	36
6.3.2	New ODMDS .....	37
6.4	<i>Lockwoods Folly Inlet Complex</i> .....	38
6.5	<i>Jay Bird Shoals</i> .....	41
6.6	<i>Yellow Banks</i> .....	42
6.7	<i>Wilmington Harbor Channel</i> .....	44

This document is a DRAFT, a working document subject to changes to be approved by Town Council.

6.8	<i>Sand Exploration</i> .....	46
46	6.9 <i>Summary of Potential Borrow Areas</i> .....	46
7.0	<i>FINANCIAL PLAN</i> .....	47
7.1	<i>Room Occupancy Tax (Accommodations Fund)</i> .....	47
7.1.1	Occupancy Tax History.....	47
7.2	<i>Local Sand Tax</i> .....	48
7.3	<i>General Fund</i> .....	49
7.4	<i>Use Of Funds For Oak Island Beach Management Plan Projects</i> .....	50
8.0	<i>Public Involvement Process</i> .....	51
9.0	<i>SUMMARY</i> .....	51
10.0	<i>REFERENCES</i> .....	54

APPENDIX A Post-Florence Renourishment Project Phase I and Phase II Plans

APPENDIX B Interlocal Agreement

APPENDIX C Oak Island Pre-Project Vegetation Line

APPENDIX D Public Comment Responses

DRAFT

This document is a DRAFT, a working document subject to changes to be approved by Town

**Commented [DR20]:** Does Appendix A show a 60-foot setback line from the seaward top of the FEMA Phase I&II dune projects for oceanfront lots? If not, please add.

**Commented [DR21]:** Does Appendix C include a 60-foot setback line from the pre-project line and the 15-foot setback from the street-side property line for oceanfront lots? If not, please add these lines.

## List of Figures

Figure 2-1: USACE CSDR Beach Nourishment Template .....	3
Figure 2-2: USACE Material Placement Quantities for Oak Island (2001 – 2018) .....	4
Figure 2-3: 2001 Sea Turtle Habitat Placement Extent .....	5
Figure 2-4: Lockwoods Folly Inlet AIWW Crossing and Bend Widener Projects .....	6
Figure 2-5: Lockwoods Folly Habitat Restoration Project .....	7
Figure 2-6: FEMA Hurricane Matthew Dune Placement Extent .....	8
Figure 2-7: Jay Bird Shoals Borrow Area .....	9
Figure 2-8: Oak Island Renourishment Project 2020/2021 Beach Fill Extent (Construction from 4/8/21 to 5/22/21 from Sta. 300+00 to 470+00) .....	9
Figure 2-9: Example Plan View – 2020/2021 Renourishment Project .....	10
Figure 2-10: Beach Renourishment Typical Cross Section – No Berm .....	11
Figure 2-11: Beach Renourishment Typical Cross Section – With Berm .....	11
Figure 2-12: Profile Station 409+00 No Berm Pre- and Post-Nourishment Example .....	12
Figure 2-13: Profile Station 364+00 With Berm Pre- and Post-Nourishment Example .....	12
Figure 2-14: Recently planted section of dune (M&N photo 6/15/21) .....	13
Figure 2-15: Oak Island Renourishment Project 2021/2022 Beach Fill Extent (Sta 465+00 to Sta 680+00) .....	14
Figure 2-16: Example Plan View – 2021/2022 Renourishment Project .....	14
Figure 2-17: Jay Bird Shoals and Central Reach Borrow Areas .....	15
Figure 2-18: Beach Renourishment Typical Cross Section – No Berm .....	16
Figure 2-19: Beach Renourishment Typical Cross Section – With Berm .....	16
Figure 2-20: Profile Station 620+00 No Berm Pre- and Post-Nourishment Example .....	17
Figure 2-21: Profile Station 650+00 With Berm Pre- and Post-Nourishment Example .....	17
Figure 2-22: Dune Planting Typical Section .....	18
Figure 2-23: Recently planted section of dune (M&N photo 7/25/22) .....	19
Figure 3-1: Oak Island Survey Line Locations and Reaches .....	20
Figure 3-2: Profile Volume Calculation Lenses .....	21
Figure 4-1: Trigger Volume Calculation .....	22
Figure 4-2: Oak Island Pre-Project Vegetation Line .....	27
Figure 6-1: Beach Management Plan Potential Sediment Sources.....	30
Figure 6-2: Native Sediment Sample Transects .....	31
Figure 6-3: Clast Survey Areas .....	33
Figure 6-4. Sample Locations within Project Area.....	33
Figure 6-5: Frying Pan Shoals Site and Vibracore Locations .....	35
Figure 6-6: Old ODMDS Site and Vibracore Locations .....	37

This document is a DRAFT, a working document subject to changes to be approved by Town Council.

Figure 6-7: New ODMDS Site and Vibracore Locations .....	38
Figure 6-8: Lockwoods Folly Inlet Complex Sites and Vibracore Locations .....	39
Figure 6-9: Jay Bird Shoals Site .....	42
Figure 6-10: Yellow Banks Site and Proposed Vibracore Locations .....	43

---

Figure 6-11: Wilmington Harbor Site and Vibracores .....	45
Figure 6-12: Sand Exploration .....	46
Figure 7-1. Total Yearly Accommodations Fund Tax (2013-2022) .....	48
Figure 7-2. Total Yearly Sand Fund Tax (2013-2022) .....	49
Figure 7-3. Total Yearly General Fund Tax (2013-2022) .....	50

---

## List of Tables

Table 4-1: Beach Management Plan Nourishment Triggers .....	22
Table 4-2: Crystal Ball Analysis Result Table for Annual Volume Change .....	23
Table 4-3: Oak Island Background Erosion Volume Need .....	24
Table 4-4: Estimate of Oak Island 30-year Volume Need of Material Placed on Beach and in Borrow Areas .....	25
Table 5-1: Project Performance Comparison .....	28
Table 6-1: Historical Native Beach Data .....	31
Table 6-2: Native Beach Characteristics and NCAC Rule Parameters .....	32
Table 6-3: Native Beach Sediment Statistics .....	32
Table 6-4. Summary of Sampling Results .....	34
Table 6-5: Frying Pan Shoals State Characteristics and NCAC Parameters .....	36
Table 6-6: Frying Pan Shoals Federal Characteristics and NCAC Parameters .....	36
Table 6-7: Old ODMDS Characteristics and NCAC Parameters .....	37
Table 6-8: New ODMDS Characteristics and NCAC Parameters .....	38
Table 6-9: Lockwoods Folly Inlet Characteristics and NCAC Parameters .....	40
Table 6-10: Eastern Channel Characteristics and NCAC Parameters .....	40
Table 6-11: AIWW Crossing and Bend Widener Characteristics and NCAC Parameters .....	40
Table 6-12: Total Volume Available .....	47
Table 7-1: OIBMP Expected Project Cost .....	50
Table 9-1: Project Performance Comparison .....	52
Table 9-2: Estimate of Oak Island 30-year Volume Need of Material Placed on Beach and in Borrow Areas .....	52
Table 9-3: Total Volume Available .....	53

This document is a DRAFT, a working document subject to changes to be approved by Town Council.

## 1.0 PURPOSE

The Town of Oak Island has had a Pre-Project Vegetation Line, previously known as a Static Vegetation Line, in place for approximately 8.4 miles of the 9 miles of oceanfront beach since the Town's 1998 large-scale nourishment project. Pre-Project Vegetation Lines were added to the remainder of the Town's oceanfront shoreline as a result of subsequent nourishment events. Due to the fact that a Static Vegetation Line Exception (now known as a Beach Management Plan) was not available to the Town at the time due to the Town not having begun a beach nourishment/management plan at the time, on December 20, 2016, the Town received approval from the North Carolina Coastal Resources Commission (NCCRC) for a Development Line for the Town's oceanfront shoreline. The main purpose of implementing this Development Line was to provide oceanfront residents a greater likelihood of being able to rebuild their homes should they be destroyed or damaged greater than 50% of their value as a result of hurricanes or other severe storm events.

**Commented [DR22]:** The Town's large-scale nourishment project was in 2001-2002

As of August 1, 2022, following a formal rulemaking process, the NCCRC eliminated the Development Line as one of its oceanfront management options for establishing the location of oceanfront development activities. With the elimination of the Development Line, and the lack of an approved Beach Management Plan, the Town of Oak Island is required to revert to setbacks based on the previously established Static Vegetation Line which is estimated to render as much as 82% of the Town's oceanfront lots unbuildable.

**Commented [DR23]:** This statement is bogus on its face. If home is destroyed or damaged 50% in a storm there's not going to be a vegetation line that meets the 60-foot setback without future nourishment to re-establish it. Main purpose was to jump start real estate sales of oceanfront property that had come to a screeching halt and rebuild on lots where homes were destroyed by Floyd in 1999 or build on vacant lots that didn't get built before 1985 in the Sea Turtle Project area that still had enough vegetation to meet the 60-foot setback. 36 new homes built in this area under the Development Line from 2017 to 2021.

The Town of Oak Island is now well into the process of developing a 30-year Beach Management plan (OIBMP). The Town therefore considers the timing to be appropriate for the application to, and approval by, the NCCRC of a Beach Management Plan. This plan was developed utilizing the criteria established in 15A NCAC 07J.1200. Once approved, this plan will allow residents of the Town to utilize the first line of stable natural vegetation as the starting point for determining the oceanfront setback requirements as described in 15A NCAC 07H.0306, as opposed to the utilizing the Pre-Project Vegetation Line as the starting point for measuring such setbacks.

**Commented [DR24]:** Good! Should never have been an option without long-term commitment to beach nourishment.

**Commented [DR25]:** Unbuildable lots have been the norm for most of the Town of Oak Island oceanfront lots since CAMA setbacks and erosion rates were put in place and enforced.

**Commented [DR26]:** When will the EIS for Frying Pan Shoals be completed?

**Commented [DR27]:** Strongly disagree. There are no permits for sand from Frying Pan Shoals which will be the primary source for the 30-year maintenance and perhaps the only source for the 2024/2025 project.

**Commented [DR28]:** If approved in the next 6 to 18 months will allow property owner's (mostly investors) to use what's left of the existing FLSNV established by the FEMA Dune Projects after Hurricane Ian (and any subsequent storms) to build on vacant lots or tear down old, smaller houses to build new, larger houses again without sand permits for future beach nourishment. No different than operating under the Development Line for all practical purposes.

## 2.0 PROJECT BACKGROUND AND SUMMARY OF PREVIOUS PROJECTS

Several connections exist between the Town of Oak Island and previous shoreline maintenance initiatives conducted by other municipalities or the US Army Corps of Engineers (USACE). The connections link the Town either through direct management of the Oak Island shoreline or through the analysis of a potential borrow area viable for Oak Island. The previous initiatives discussed herein include the following projects:

- Brunswick County Beaches Coastal Storm Damage Reduction (CSDR) 50-year project
- Wilmington Harbor Sand Management Plan
- 2001 Sea Turtle Habitat Restoration Project
- Lockwoods Folly Habitat Restoration Project
- FEMA Hurricane Matthew Emergency Dune Project
- Lockwoods Folly Inlet, AIWW Inlet Crossing
- 2020/2021 Beach Renourishment Project
- 2021/2022 Beach Renourishment Project

### 2.1 Brunswick County Beaches CSDR

Congress authorized the Brunswick County Beaches CSDR (Coastal Storm Damage Reduction) project in 1966; however, in 1974 the USACE ceased development of the project due to insufficient local support. The original project covered all of the Brunswick County shoreline but in 1994 the USACE initiated a re-evaluation study (GRR) for a project covering Oak Island and Holden Beach (USACE, 2012). Construction of the project has not occurred to date due to federal funding

This document is a DRAFT, a working document subject to changes to be approved by Town Council.

limitations. The USACE conducted a significant amount of field investigations to identify a potential borrow site for the 50-year project. The USACE conducted feasibility level studies to classify the sediment characteristics within the following potential borrow sites:

- ◆ Frying Pan Shoals (FPS)
- ◆ Jay Bird Shoals
- ◆ Wilmington Harbor ODMDS
- ◆ Lockwoods Folly Inlet & AIWW Crossings
- ◆ Lockwoods Folly River
- ◆ Yellow Banks AIWW dredge material disposal site
- ◆ Tubbs Inlet
- ◆ Shallotte Inlet
- ◆ Offshore Ocean Isle, Holden Beach, & Oak Island.

The GRR identified Frying Pan Shoals as the most suitable borrow source for the 50-year project life. The USACE identified Jay Bird Shoals as an alternate site but prioritized Frying Pan Shoals due to its relative size, dynamic nature, and recharge capabilities (USACE, 2012). The USACE excluded some of the smaller sites such as Lockwoods Folly Inlet due to the limited material availability compared with the total project needs.

The GRR also provides a preferred design template of a 14 ft dune and 75 ft berm referenced as the 14/75 plan (USACE, 2012). The proposed dune would extend approximately 25 ft wide at elevation +14 (NGVD). The berm would extend 75 ft from the seaward toe of the dune at elevation +7 NGVD. The landward and seaward slope of the dune stands at a 5:1 and 10:1 ratio respectively. This template is shown below in Figure 2-1 referenced to vertical datum NAVD88.

At this time, it appears that the overall Brunswick County Beaches CSDR project has been stopped completely due to lack of funding. Individual towns have been applying for separate USACE CSRM (Coastal Storm Risk Management) projects as of late including the Town of Oak Island. To date, a USACE CSRM project for the Town of Oak Island has not been approved for study.

**Commented [DR29]:** Have you compared 2012 USACE quantities for 30 years (instead of 50 years) to proposed quantities for BMP while accounting for differences in design template and LoP?

Up until 2007 the USACE used Jaybird Shoals as the primary borrow area in the GRR but adverse impacts of using Jaybird required the switch to Frying Pan which dramatically increased the cost and required two dredging cycles (seasons) for initial project construction and each renourishment cycle.

**Commented [DR30]:** Cost benefit ratio was .7 in 2012 draft GRR without recreation benefits which cannot be more than 50%. Didn't meet federal funding criteria at the time of at least 3.0 cost benefit ratio.

**Commented [DR31]:** 50-50 cost shared 3-year feasibility study to determine if it's in the federal government's financial interest to participate in future efforts to reduce risks.

This document is a DRAFT, a working document subject to changes to be approved by Town

**Figure 2-1: USACE CSDR Beach Nourishment Template**

## **2.2 Wilmington Harbor Sand Management Plan**

The sand management plan for Wilmington Harbor references the deepening project administered by the USACE in addition to periodic maintenance of the harbor entrance. The project allows placement of beneficial use material along the shoreline of Oak Island, Caswell Beach, and Bald Head Island. The USACE deepened Wilmington Harbor in 2001 and placed approximately 1.8 Mcy along the Oak Island shoreline. The USACE placed the material along the eastern and western portion of Oak Island. (The 2001 Sea Turtle Habitat Restoration placed 2.65 Mcy of material along the central portion of Oak Island.)

The Town of Oak Island receives sediment on the eastern 1/4 of their beaches from the maintenance dredging events of Wilmington Harbor Ocean Bar Channel at the mouth of the Cape Fear River. USACE maintains the authorized channel depths through maintenance dredging events typically every 3 years. The Sand Management Plan dictates that Bald Head Island receives the material for two (2) consecutive maintenance events then Caswell Beach/Oak Island will receive material from the third maintenance event, then the process repeats. This correlates to one (1) maintenance event placed on Caswell Beach/Oak Island every 9 years. The most recent maintenance event with placement on Caswell Beach/Oak Island occurred in 2018 and placed approximately 640,300 cy. The previous maintenance event which placed material on Caswell Beach/Oak Island occurred in 2009 and placed approximately 336,000 cy. Figure 2-2 shows the approximate placement limits and quantities for the Wilmington Harbor initial deepening and maintenance events.

Although the east end of Oak Island benefits from the periodic Wilmington Harbor material placement, the project does not provide a design template to maximize the benefits. The USACE places the material along the shoreline close to the MHW contour (USACE, 2000). This typically entails the least cost method for sediment placement and only meets general design standards.

## **2.3 2001 Sea Turtle Habitat Restoration**

The USACE also conducted a restoration project in 2001 along the central portion of Oak Island. The project placed approximately 2.65 Mcy from the Yellow Banks dredged material disposal site along the Oak Island shoreline (Offshore & Coastal Technologies, 2008). The Yellow Banks disposal site is located along the northern bank of the AIWW at approximately mid-island. The project addressed erosion impacts between East 26th Place to East 58th Street that were limiting suitable sea turtle habitat (USACE, 1999). The design template for the habitat restoration commenced with a 20 ft wide dune and then a berm extending approximately 70 ft at elevation +8 NGVD (+7 NAVD88). The dune crested at elevation +11 and maintained seaward and landward slopes of 1:5. Figure 2-3 shows the project limits of the habitat restoration project.

**Commented [DR1]:** Original SMP as described in next paragraph subject to revision in 20 years which is now. Is a revised SMP under consideration or has one already been approved? If so, what is it? If not, why not? Does performance of terminal groin on Bald Head justify 2/3 of sand going to Bald Head? The terminal groin was supposed to reduce the need for beach maintenance on Bald Head, so shouldn't more sand be available more often for Oak Island?

**Commented [DR2]:** The Corps is authorized to place sand as far as SE 58th under the SMP but the least cost disposal placed sand about half that distance in 2009 and the Town had to pay the delta cost to dispose of sand down to SE 58th in 2018.

**Commented [DR3]:** Maintenance event sediment disposal is least cost method without a design template which means it would not qualify as a FEMA Engineered Beach.

But it has maintained the dunes that grew naturally from a 20 foot strip of sea oats planted on the most landward portion of the flat berm in 2001, and it does provide a 10-year LoP and a vegetation line that meets oceanfront setbacks.

**Commented [DR4]:** Design template description is misleading. Berm after initial construction extended 250-300 feet in order to have a berm width of 70 feet after 10 years of erosion.

This document is a DRAFT, a working document subject to changes to be approved by Town Council.

## 6.2 Frying Pan Shoals

Frying Pan shoals extends from the entrance of the Cape Fear River to approximately 16 nautical miles offshore in the Atlantic Ocean. Frying Pan Shoals and was split into two sections correlating to the portion of Frying Pan Shoals located within State and Federal waters as shown in Figure 6-5. Reconnaissance level investigations of Frying Pan Shoals proposed borrow collected 29 vibracores in State waters and 23 vibracores in Federal waters for a total of 52 vibracores. Spacing of the Frying Pan Shoals State vibracores was 2,000 ft and Frying Pan Shoals Federal was 4,000 ft. Placement of the vibracores targeted the offshore slope of the shoal in an effort to minimize environmental impacts and remain in a deeper depth to facilitate safe dredging given draft limitations of dredge vessel. Sediment compatibility results from these vibracores resulted in beach compatible material in both the State and Federal areas as show below in Table 6-5 and Table 6-6 respectively. The available volume of beach compatible material within the areas shown (studied to date) is estimated to be 29 Mcy in Frying Pan Shoals State and 58 Mcy in Frying Pan Shoals Federal.

Based on the results of the reconnaissance level investigations, the Town contracted with Amdrill for a more detailed level of investigation refining an area within Frying Pan Shoals State and Frying Pan Shoals Federal to take additional vibracore samples to supplement the vibracores taken in 2019. Within the Frying Pan Shoals State site, 28 additional vibracores are proposed to be collected during the Fall of 2022 which will refine the spacing to 1,000 ft. Within the Frying Pan Shoals Federal site, 9 additional vibracores are proposed to be collected during the Fall of 2022 which will refine the spacing to 2,000 ft. The estimated volumes associated with the refined Frying Pan Shoals State and Federal areas are 10 Mcy and 3 Mcy respectively.

**Commented [DR1]:** What is the sail distance from borrow area to placement site for State area? Federal area?

## 6.3 Wilmington Harbor ODMDS

The Wilmington Harbor Ocean Dredged Material Disposal Site (ODMDS) could also provide a borrow source option. The ODMDS falls approximate to Frying Pan Shoals and Jay Bird Shoals. The ODMDS is divided in to two separate locations: Old ODMDS and New ODMDS. The estimated sail distance between the Town and the Wilmington Harbor ODMDS ranges from approximately 6.5 to 12 miles depending on the eastern or western shoreline limits respectively.

### 6.3.1 Old ODMDS

The Old ODMDS borrow area is located to the north of the New ODMDS. In 2019, Amdrill collected five (5) vibracores from distinct mounds within the Old ODMDS site as shown in Figure 6-6. To further confirm the sediment quality is consistent across each of the mounds, an additional four (4) vibracores are planned to be collected in the Fall of 2022. This area is estimated to contain 1 Mcy of beach compatible sand. The characteristics of this material are compliant with the parameters defined by the NCAC as shown in Table 6-7.

### 6.3.2 New ODMDS

The New ODMDS borrow area is located farther offshore of the Old ODMDS adjacent to the Federal FPS site. In 2019, Amdrill collected five (5) vibracores from distinct mounds within the New ODMDS site as shown in Figure 6-7. To further confirm the sediment quality is consistent across each of the mounds, an additional seven (7) vibracores are planned to be collected in the Fall of 2022. This area is estimated to contain 0.7 Mcy of beach compatible sand meeting NCAC standards as shown in Table 6-8.

**Commented [DR2]:** Table 9-3 and its inclusion in the Executive Summary should state that these quantities are reconnaissance level.

**Commented [DR3]:** Will investigations include identifying shipwrecks?

**Commented [DR4]:** Plan submission premature before the results of Fall 2022 vibracore samples are analyzed.

**Commented [DR5]:** These refined volume estimates should be added as a separate column to Table 9-3 and its inclusion in the Executive Summary

**Commented [DR6]:** Why wasn't sail distance given for Frying Pan Shoals?

**Commented [DR7]:** Plan submission premature before the results of Fall 2022 vibracore samples are analyzed.

**Commented [DR8]:** Reconnaissance or refined level estimate?

**Commented [DR9]:** Plan submission premature before the results of Fall 2022 vibracore samples are analyzed.

**Commented [DR10]:** Reconnaissance or refined level estimate?

This document is a DRAFT, a working document subject to changes to be approved by Town Council.

#### **6.4 Lockwoods Folly Inlet Complex**

The Lockwoods Folly Inlet Complex includes the Lockwoods Folly Inlet, Eastern Channel, AIWW Crossing and Bend Widener, and Sheep Island as shown in Figure 6-8. Vibracores were collected in 2019 by Athena for all locations except Sheep Island. Landside sampling equipment is required for this location and will be collected at a later date. Vibracore sample data was processed by Terracon and the results for each site shows beach compatible material exists within each site as shown in Table 6-9 – Table 6-11. These sites are considered a renewable source and would be dredged cyclically.

The USACE maintains the Lockwoods Folly navigation channel to a depth of -6 MLW and width of 150 ft (ATM, 2013). The USACE generally dredges the inlet channel and sidecast the material adjacent to the inlet; however, hopper dredges have also placed material in the nearshore along the adjacent shoreline. The maintenance events historically have occurred four (4) times per year or once a quarter. However, funding restrictions have limited recent maintenance events to approximately twice (ATM, 2013). Based on historic maintenance records, the channel experiences a shoaling rate of approximately 125,000 cy/yr (Offshore & Coastal Technologies, 2008). The sediment shoaling within the navigation channel could provide the Town of Oak Island a cost effective means to obtain material for shoreline management. The action would most likely require a management agreement with the USACE and potentially the Town of Holden Beach. Over the next 30 years, Lockwoods Folly Inlet could provide 3.75 Mcy of material total (1.9 Mcy to Oak Island if a 50/50 split with Holden Beach is reached). However, with the current authorized depth of only -6 ft MLW, the channel would have to be deepened to allow dredge plants that could actually place material on the beach. Since the current authorized depths do not allow for dredge access to facilitate beach placement, no volume is assumed to be available from the Lockwoods Folly Navigation Channel.

The Eastern Channel, located along the western end of Oak Island, provides an additional sediment source for beneficial use material. The Town of Oak Island conducted a maintenance event for the Eastern Channel in 2015 and placed approximately 227,315 cy as a beneficial use along the West End Reach shoreline. The Shoreline Mapping Program monitors the infilling of Eastern Channel within the area containing beach compatible material. Historical shoaling patterns indicate that the channel reaches an equilibrium where approximately 100,00 – 150,000 cy of material would be required to be dredged to meet the permitted template after 3 years. Therefore, over the next 30 years, Eastern Channel could provide 1.5 Mcy of material.

Similar to the Lockwoods Folly inlet navigation channel, the USACE also holds the authorization to maintain the crossing and bend widener. However, the Town of Oak Island has shared the authorization through a Memorandum of Agreement (MOA) with the USACE. Typically, the USACE places material excavated from the AIWW and bend widener along the beachfront as a beneficial re-use every two years on Oak Island (the other years go to Holden Beach). The previous two dredge events (2019 and 2021) have been placed within the West End Reach on Oak Island. The 2019 event placed approximately 120,000 cy of material from the AIWW Crossing on the Oak Island shoreline. The 2021 event placed approximately 160,000 cy of material from the AIWW Crossing and Bend Widener on the Oak Island shoreline. It will be assumed going forward that the 1-yr dredge cycle and beneficial re-use placement will continue to be split between Holden Beach and Oak Island. Therefore, over the next 30 years, the AIWW Crossing and Bend Widener could provide 2.1 Mcy of material to Oak Island.

Finally, Sheep Island (DA286) is located at the confluence of Eastern Channel and the AIWW. Oak Island has 5 vibracores proposed within the disposal area to test the sediment compatibility. Anecdotal information from USACE has indicated that beach quality material has been placed in

**Commented [DR11]:** Use of the USACE shallow draft hopper dredge built for this purpose should be reinstated.

**Commented [DR12]:** Adamantly opposed to deepening the channel.

**Commented [DR13]:** The primary purpose was Habitat Restoration , not channel navigation maintenance.

**Commented [DR14]:** This is the amount that should appear in a separate refined column to Table 9-3 and its inclusion in the Executive Summary with a note that this material is placed from Station 650+00 to 680+00 the western third of West End trigger volumes.

This document is a DRAFT, a working document subject to changes to be approved by Town Council.

this site. The Comprehensive Shoreline Management Plan (MN, 2016) estimated the volume of Sheep Island for a one-time use of 452,000 cy. Sediment compatibility and volume will be confirmed in future data collection efforts.

The combined volume associated with the Lockwoods Folly Inlet Complex is 4.05 Mcy.

**Commented [DR15]:** Reconnaissance level column Table 9-3 and its inclusion in the Executive Summary.

### 6.5 Jay Bird Shoals

Jay Bird Shoals, located adjacent to the mouth of the Cape Fear River as shown in Figure 6-9, was utilized in the 2020/2021 and 2021/2022 Renourishment Projects on Oak Island. Approximately 2 Mcy of material combined over the 2 projects have been removed and placed on Oak Island. Jay Bird Shoals will continue to be monitored by Oak Island to quantify recharge of the shoal for potential use in the future. Currently, no projects are planned to utilize this site in the near future.

**Commented [DR16]:**  $765\text{K} + 816\text{K} = 1.581\text{K}$ ?

**Commented [DR17]:** Does this mean that the sand source for the 2024/2025 project will be Frying Pan Shoals given the limited quantities "available" from the ODMDS?

### 6.6 Yellow Banks

The Yellow Banks disposal site sits approximately midway between the jurisdictional limits of the Town and Lockwoods Folly Inlet along the northern bank of the AIWW as shown in Figure 6-10. Estimates suggest Yellow Banks disposal area currently contains approximately 4.2 Mcy of beach compatible material (USACE, 2012). However, based on results of a 2002 project conducted by the USACE, the beach compatible material has intermixed with rock. Thus, the site will have test pits dug, in addition to vibracores, as an increased level of sediment sampling in an effort to identify the presence of rock prior to placement of material. Each site will contain five (5) vibracores to verify sediment compatibility.

**Commented [DR18]:** Reconnaissance level column Table 9-3 and its inclusion in the Executive Summary with a note that no vibracore samples have been taken to determine sediment compatibility.

**Commented [DR19]:** 2001 Sea Turtle Habitat Restoration Project. There was no rock in the Corps vibracores for the project.

### 6.7 Wilmington Harbor Channel

The Wilmington Harbor Channel requires regular maintenance dredging to ensure safe navigation conditions exist to allow access to the Port of Wilmington. Infilling of the channel occurs from sediment transport from the adjacent beaches of Caswell Beach and Bald Head Island as well as from the adjacent shoal system of Jay Bird Shoals and Frying Pan Shoals. Four (4) reaches of the Wilmington Harbor Channel were identified to contain beach compatible material as listed below:

- Smith Island Channel
- Baldhead Shoal Channel Reach 1
- Baldhead Shoal Channel Reach 2
- Baldhead Shoal Channel Reach 3

Reconnaissance level vibracore collection is planned for Fall 2022 with the collection of 10 vibracores; two (2) within Smith Island Channel, two (2) within Baldhead Shoal Channel Reach 1, two (2) within Baldhead Shoal Channel Reach 2, and four (4) within Baldhead Shoal Channel Reach 3 as shown in Figure 6-11. Based on the past two projects to date over the last 18 years, the estimated volume associated with the Wilmington Harbor Channel is 1.6 Mcy over the 30-year plan.

**Commented [DR20]:** Are these areas being investigated to supplement typical SMP quantities? Plan submission premature before the results of Fall 2022 vibracore samples are analyzed.

**Commented [DR21]:** Depends on expired Sand Management Plan (see Section 2.2). Should not be included in Table 9-3 until revised SMP is approved.

### 6.8 Sand Exploration

The Town also undertook additional borrow area exploration throughout Long Bay with the collection of 111 additional vibracores distributed across three additional sites as show below in Figure 6-12. The laboratory results from this extensive data collection yielded incompatible results for beach placement within the USGS and OKI Exploratory areas. The Central Reach area show results that met the NCAC criteria for beach placement; however, after minimal utilization for the 2021/2022 Beach Renourishment Project, the resultant material was not deemed compatible and therefore the site was abandoned for this project and future projects.

**Commented [DR22]:** Could also happen with "available" ODMDS borrow areas

This document is a DRAFT, a working document subject to changes to be approved by Town Council.

#### 6.9 **Summary of Potential Borrow Areas**

The total volume available within all available sources is approximately 99 Mcy as presented in Table 6-12.

**Commented [DR23]:** Plan submission premature before the results of Fall 2022 vibracore samples are analyzed for Frying Pan Shoals and ODMDS.

**Table 6-12: Total Volume Available**

Area	Total Volume Over 30 -year Plan (cy)
Frying Pan Shoals - State	29,000,000
Frying Pan Shoals - Federal	58,000,000
Old ODMDS	1,000,000
New ODMDS	700,000
Lockwoods Folly Inlet Complex	4,502,000
Jaybird Shoals	NA
Yellow Banks	4,200,000
Wilmington Harbor Channel	1,600,000
<b>TOTAL</b>	<b>99,002,000</b>

Therefore, if all mentioned sources are incorporated the available material (99Mcy) would more than meet the 30 year sediment need of approximately 16.2 Mcy which includes background erosion, storm erosion, and potential sea level change. However, it must be noted that some of the borrow areas listed above (such as the Lockwoods Folly Inlet Complex) can only be used for certain areas of the island due to dredge plant constraints.

**Commented [DR24]:** Refined 10 Mcy

**Commented [DR25]:** Refined 3 Mcy

**Commented [DR26]:** Could be abandoned like Central Reach.

**Commented [DR27]:** Could be abandoned like Central Reach.

**Commented [DR28]:** Bird in hand is the 2.1 Mcy placed from Section 650+00 to 680+00 in the western third of West End trigger volumes.

**Commented [DR29]:** No vibracore samples have been taken to determine sediment compatibility

**Commented [DR30]:** Should not be included until revised SMP is approved.

**Commented [DR31]:** Too optimistic?

**Commented [DR32]:** Besides LFIC - Which borrow areas? Which areas of the island? What constraints?

# Appendix D3:

## Public Hearing Comments

Excerpt of Minutes for the  
October 4, 2022 Meeting – Public Hearing  
for the Beach Management Plan

**MINUTES**  
**TOWN COUNCIL PUBLIC HEARING & SPECIAL MEETING**  
**TUESDAY, OCTOBER 4, 2022 – 6:00 PM**  
**COUNCIL CHAMBERS - OAK ISLAND TOWN HALL**

Present: Mayor S. Elizabeth White, Mayor Pro Tempore John W. Bach, Council members Sheila M. Bell, Charlie K. Blalock, Bill Craft, and Mark U. Martin, Town Manager David Kelly, Town Attorney Brian Edes, and Town Clerk Lisa P. Stites, MMC.

I. Call to Order – Mayor White called the meeting to order at 6 p.m. Mayor White noted that the Town Attorney was not able to attend, and that the Closed Session would be removed from the agenda.

Mayor White said that tonight, Council was here to listen, not discuss. She asked speakers to comment only the Beach Management Plan, not the recent hurricane, and said that speakers have three minutes. She also said written comments could be submitted to the Town Clerk.

**II. PUBLIC HEARING (AND ACTION)**

II.1 PUBLIC HEARING (AND ACTION) ([OKI\\_BMP\\_2022\\_Draft\\_TOWN\\_092722](#)): The purpose of the Public Hearing was to receive citizens' comments on the Beach Management Plan (prepared by Moffatt & Nichol) to be submitted to the NC Coastal Resource Commission for consideration.

Terri Cartner, 105 NW 27<sup>th</sup> Street: Ms. Cartner thanked Council members for their due diligence in working through this process, saying it was a complicated plan, very complicated for those who were not sand engineers. She said that this was a huge decision for the Town, and that with the Plan being presented last week and having Public Hearing tonight with a motion on the agenda, she was concerned that it was too rushed. She said that the citizens needed to hear more about this issue, and in layman's terms. Ms. Cartner said she hoped Council would take the time to get that information out there in a way that taxpayers and citizens could understand so they understood the real implications if the Plan is adopted.

Ann Schading, 2502 W. Yacht Drive: Ms. Schading said that this was complicated, and that she had tried to read the document, but she was not an engineer. She said she had been volunteering to help citizens understand it once she does. She said she didn't think there was a hurry and that they need to take as much time as necessary to do this. Ms. Schading said that not doing it was a possibility. She said that she wanted to make sure they had a common goal, and she wasn't sure if that was the tourists, the front row of houses, or the beautiful beach. She said that she hoped Council had a clear goal to keep in mind as the process proceeds.

David Bodenheimer, 5119 Minnesota Drive: Mr. Bodenheimer said the Beach Management Plan was too hasty, too risky and too costly. He said Moffatt & Nichol presented the plan last week, which did not give enough time for due diligence. He asked what the rush was. Mr. Bodenheimer said that nowhere in the written record did it show a dire emergency that required a quick vote. Mr. Bodenheimer said his written comments noted three risks – the risk of partnering with the Coastal Resources Commission (CRC), facts that are unknown and unexplored, and legal questions that are not asked or answered. Mr. Bodenheimer said that the Town was in this mess because the CRC said no in 2016 and yes this year. He said the Supreme Court says when an agency flips like that, it was classic arbitrary and capricious conduct. He asked if the Town made a 30-year commitment, would CRC renege on that commitment. Mr. Bodenheimer said that the Plan was to cost \$140 over 30 years. He said that there were three cost factors to consider. First, you can't buy a 30-year Plan without a price tag. He said the cost had to be nailed down

before Council could make a rational decision on this issue. He said the cost would be much higher than the \$140 million; he said previous estimates did not include 8 percent inflation. Mr. Bodenheimer noted that he had also submitted written comments.

Dena Thomason, homeowners of 217 NE 52nd St. and a house on Dolphin Drive: Ms. Thomason said she and her husband were excited to be moving here soon. She said her family fully supports the Beach Management Plan. She said that this beach had been very good to them, in intangible and some easily quantifiable ways. As Oak Island has become a more sought-after destination, the number of days their houses have been rented has increased, along with the rental fees. She said her brother has a thriving business on Oak Island, which becomes more profitable each year. She said without a properly nourished beach, all those successes could be easily erased. Ms. Thomason said a wise man had once told her that if you say no to something, you're actually saying yes to something else. She said that by saying no to this Beach Management Plan, they were saying yes to accepting an eroding beach that will eventually be unusable. They would be saying yes to decreased property values which would lead to increases in property taxes. They were saying yes to a majority of the rental revenue on the island, to viable businesses being forced to close, and to eventually having a beach that you can't even walk down unobstructed. Ms. Thomason said they were more than happy to pay their fair share to protect our beautiful beach and to ensure a promising future for Oak Island, their new home.

Bob Greene, 130 SE 40th Street: Mr. Greene said he had read and re-read the Plan and he still wasn't sure what he was reading. He said that this had been kicked around for a while. He said that that the Town would be buying something and that Council didn't really know what we were buying. He said that someone, somewhere, should be doing an "if, then" analysis. Mr. Greene said he would be the first person to say we need to protect the beach and that he had to pay more, he would pay more, but an analysis should be done – if we do this, the cost is this and if we don't do this, here is what the consequences could be. He said that maybe they have to buy the entire package, and if so, then buy it, but not to do it just because the engineers say you have to.

Dara Royal, 216 NE 47th St., written comments provided as follows: On the morning of October 3rd, I submitted via email to the Town Clerk, Mayor and Town Council, Town Manager and Finance Director, Development Services Director, Planner, and Attorney written public comments on the draft Beach Management Plan in the form of a pdf file of a 54-slide PowerPoint presentation of the History of Oceanfront Development and Potential Impacts of Granting a Pre-project Line Exception along with a pdf file of an 18-page Word document with 121 comments on 18 Sections or Subsections of the draft Beach Management Plan. I respectfully requested submission of both of these files with the Town's application for approval of the Beach Management Plan per 15A NCAC 07J .1201 (e). Key points to consider from these documents:

- Each of the 8 potential areas listed as available sediment sources carry significant limitations for permitting.
- Plan submission is premature before the results of Fall 2022 vibracore samples are analyzed for Frying Pan Shoals, ODMDS, and Wilmington Harbor Channel.
- Plan submission is premature before permits are obtained to dredge sand from Frying Pan Shoals.
- Sand volume needs are not available for the 6-year cycle maintenance events over the 30-year life of the plan without Frying Pan Shoals.
- Sand volume needs may not be available for the 2024/2025 advance fill project without Frying Pan Shoals.
- Cost estimates for the 2024/2025 advance fill project and subsequent maintenance events may not adequately reflect the cost of mining sand the additional distance from Frying Pan Shoals over 2 dredging cycles (seasons) with 2 mobilizations.

- Cost estimate for a 6-year maintenance event does not include the volume needed to replace sand lost during storm events (780,000 cy x \$18.75 per cy = \$14,625,000).
- Covid-19 provided a unique windfall to the accommodations tax fund. It is unrealistic to expect this trend to continue through a recession and sustained inflation.
- The Financial plan includes an 87.5% increase in the amount of Sand Tax collected by 2028.
- The Financial Plan anticipates that \$1 million per year could be set aside for beach nourishment funding from General Fund reserves based on recent history. It is unrealistic to expect this trend to continue through recession and sustained inflation.
- Using General Fund reserves is equivalent to an increase in the Sand Tax.
- Non-beach infrastructure and service needs will continue to go unmet and degrade if taxes and general fund reserves continue to be diverted to beach nourishment.
- The Financial Plan does not include any additional state funding for the 6-year cycle maintenance events over the 30-year life of the plan.
- Voters rejected paying for beach nourishment with only local funds on a 6-year cycle and rejected increases in the town wide Sand Tax during the most recent election cycle in 2021.
- Unbuildable lots and non-conforming structures have been the norm on the oceanfront for most of the Town of Oak Island since CAMA setbacks and erosion rates were put in place and enforced.
- The vegetation on the FEMA Phase I & II Dune Projects could make lots buildable from SE 58th Street to the end of W. Beach Drive if a pre-project line exception is granted.
- 253 structures built before 1994 with less than 1500 heated square feet are at risk of being torn down and replaced by larger structures if a pre-project line exception is granted.
- The Town does not yet have permits for sand for the 2024/2025 advance fill beach nourishment project or subsequent maintenance events.
- Approval of a Beach Management Plan with a pre-project line exception in the next 6 to 18 months would be no different from continuing to operate under the Development Line rules repealed by the CRC for all practical purposes.

Therefore, I respectfully request that you vote against approving the Beach Management Plan. Either way, I also respectfully request a written response to my comments on the Beach Management Plan. Thank you for your consideration.

Durnal Gilbert, 5432 W. Beach Drive: Mr. Gilbert said that he knew this was a hard decision, and that he had been speaking with beachfront property owners. He said that they understand this is a tough decision, but they want to stress that the beach is for everyone. He said he knew there was a perspective that because they are on the beach, they should be responsible for the nourishment. He said that they do understand the responsibility they, as property owners, have to maintain the beach, but that the beach is for everyone. Mr. Gilbert said he spoke at a recent meeting about his plans to build a house on his property. He said that he had CAMA representatives visit his property, and that his lot is not buildable. Mr. Gilbert said that the number he heard was that 80 percent of the oceanfront properties were affected. He asked why property owners weren't told about the change from the CRC. He also asked if money lenders would issue loans for properties that were not buildable. He also said that he wondered about paying the tax bill when the property was not buildable. Mr. Gilbert said he hoped that they would look at maintaining the beach not just for the beachfront owners but for the entire community, the businesses, the tourism, and all that is generated by it. He said that while this beach nourishment plan many not be perfect, it goes a long way toward addressing the maintenance, which quite candidly, isn't that the responsibility of the Town?

#### Submitted Comments:

Melanie Morgan, 4808 W Beach Drive, written comments provided as follows: Hey Y'all! I know there is a meeting tomorrow night and since I won't be able to be there, I wanted to voice my support for beach renourishment. But first, I want you all to know how much I appreciated the hurricane information on the

town's website. Seriously appreciated. This has been much needed and it was spot on. All the information we needed in one place, and frequently updated. I was very happy with how our dune protected our homes, road, water, sewer and power lines in the hurricane. Even though the sea oats were still so small, their roots had really grown! I know we lost a lot but the dunes did their job. I want to tell you all again that I learned from helping a buyer that wasn't sold on Oak Island, how awesome our town is. I grew up here and didn't even realize how special this place is until I started looking at other beach towns. We have many assets that other towns do not. Such as:

- Trees. When you drive across either of our bridges, you see green. Beautiful trees. Other islands you only see rooftops.
- TWO bridges! We have two ways to get on and off our island, which helps with traffic and also provides multiple evacuation routes. No one else around has two bridges.
- X zone. Land with little flood risk that can be built on without requiring flood insurance. Do you realize that all the other Brunswick County islands do not have any X zone? This is one reason why our island has seen such a boom in development. People can live here without worrying about their house flooding, or having to pay high flood insurance premiums.
- The X zone is also a reason we have 2 grocery stores on our island. Some people say they don't want chain stores here. Let me tell you, when you live here, year after year, you realize how lucky we are to have conveniences. Food Lion, Publix, Dollar General, Thomas Drugs, Oak Island Hardware... these are assets to our community.
- The Jetport is also an asset. This brings a lot of investment to our area, and likely other benefits such as people with knowledge and specialized training.
- Water and sewer. The other beaches still require a septic system. Which requires land space, which requires trees to be removed...
- Underground power lines. Many other beaches still do not have it. Besides it being ugly to have power lines everywhere above ground, we hardly ever lose power here. Major asset!
- We have many town owned assets, like the piers, boat ramps, many parks including Middleton Park with the stage for concerts, the splash pad and playground, the rec center which is getting a makeover, the tennis and pickleball courts, the ball fields, the 801 Center, the skate park...
- More public beach access parking spaces than anyone else. Our beach is accessible.

Where I am going with this, is that we are the cream of the crop with Brunswick County beaches. We have really got it going on here. We cannot be all that, and also not support our beach itself. It's not just about oceanfront properties. It's about protecting our tax base and our infrastructure. Preventing the expense of having to clean up and repair damage after storms. And yes, preventing possible lives lost, like has happened in Florida. Also, if we allow homes (and infrastructure) to fall into the ocean, it creates an environmental hazard, and a safety hazard. All the assets I mentioned were made possible by investment from a strong tax base and strong leaders. There may be some expense to our property owners, but as I have said before, do not move to a coastal town and expect your taxes to be low. That is not a reasonable expectation. There is a reason people move here, and it's not the humidity and no see ums. We have a one time opportunity to get \$20 Million in help. It would be a huge mistake not to take advantage of that. The opportunity will not happen again.

Nancy and Scott McMurray, 6607 W. Beach Dr., written comments submitted as follows: Mayor White and City Council Members, We urge you to support a submission of a Beach Management Plan to CAMA for multiple reasons. The August 1, 2022 changes in the vegetation line have resulted in over 80% of our island's ocean front lots to be non-rebuildable unless the town has an approved beach management plan. This will result in a catastrophic financial hit to property owners, residents, and the entire island economy. No homes will be bought unless they are cash transactions because banks will not loan money to buy non-rebuildable property. Without a plan Oak Island will not be favorably looked upon when asking for grant money to assist maintaining our beach. If the beach is not maintained and homes are lost to erosion our town will lose the main financial engine; tourism. We understand that financial

commitments can be substantial, but we are confident that by putting our minds and lobbying energies to work these commitments will be attainable. What you have done over the past year to find money to match the \$20 million grant from the state proves that resources can be found. We also believe that people who choose to live in a beach community all have a stake in the beach being maintained. There are obligations within every community to better it and support it.

Jean Suther, written comments provided as follows: 1. Re: Beach Plan: Has a scientist even been hired to help with the imbalance of engineers steering this proposal and plan? Quote from the State Port Pilot - "BEACH PLAN Oak Island's \$40-million major beach project faces public scrutiny and possible council action at Tuesday's meeting." So the taxpayers will be on the hook for \$20-million dollars for this one time deal in order to acquire \$40-million. What's going to happen if we have more storms this year, we have 2 more months to go on this hurricane season - how close will we be to maxing out these funds? 2. Re: Paid Parking: Has the Town lawyer, Brian Edes, given any explanation as to why he recommends that renters shouldn't be charged? Such a suggestion is ludicrous - they are the ones that crowd our beaches, it certainly isn't day-trippers that are parking here. We the people have a right to know why this absolution should be given to renters!! 3. Has everyone there at Town Hall forgotten that 2023 will be a new revaluation year? So whether you raise our tax rate or not - we will probably see a huge increase in our tax bills. For once I ask keep your tax payers in mind rather than every other plan, assessment or obligation you deem to pass on to us.

Nelson & Diana Bareis, written comments provided as follows: We urge the Town Council to move forward, and request approval of the Beach Management Plan (BMP) as provided by Moffatt & Nichol. The beach is an asset to the entire community, not just beachfront homes. No BMP, non-rebuildables would reduce their value by as much as 90% along with taxes. No BMP, beachfront homeowners will not be unable to sell.

Mr. Kelly said that additional comments could be submitted.

Mayor Pro Tempore Bach said that the Plan included completely unreliable data, that it was a forecast, and that it probably couldn't be validated. He said that Council needed to do the due diligence. He said he wanted to defer this item for 100 days to give Council time to analyze and review it and, if so desired by Council, to receive additional public comments.

**Mayor Pro Tempore Bach made a motion to close the Public Hearing at 6:22 p.m. The motion passed unanimously.**

**Mayor Pro Tempore Bach made a motion to defer consideration of the BMP Moffatt & Nichol Plan for 100 days per Council's Rules of Procedure, Motion #11. Councilman Craft seconded the motion.** Councilman Bell asked with that 100 days, could they still make the CRC's February agenda and allow for another Public Hearing. Mayor Pro Tempore Bach said that if they could submit the Plan in February or April, they would be far more confident that this was something they wanted to do and they will have given it a thorough review. Mr. Kelly said they could hold a Public Hearing during that 100 days, and still make the February CRC meeting, or try for the April meeting. Mr. Kelly said that they could have Moffatt & Nichol to respond to any of Council's questions. He also said that the numbers in the Plan would change because those numbers were based on the survey taken prior to Hurricane Ian. Mr. Kelly said he thought taking 100 days was a good idea. Councilman Craft asked if Mr. Hatten could provide some numbers showing projected revenues for Accommodations tax and sand tax. Mr. Kelly said that staff had provided, and would continue to provide quarterly financial reports. Answering a question from Councilman Bell, Mr. Kelly said those numbers that Moffatt & Nichol used in showing how the Plan would be paid for were what Council had sort of approved back in April. He said that those projections

include the 5-cent sand tax, though it was up to Council to set the tax rate every year. Councilman Bell said she thought there was some confusion about the assessments that were discussed a year or more ago, and those numbers discussed were prior to receiving the \$20 million in funding from the State. Mayor Pro Tempore Bach said that they needed to consider inflation, and some scenarios such as if the cost of however many lots were affected equaled what the Town would pay for nourishment. **The motion passed unanimously.**

Councilman Martin said that he agreed with the delay because he had been working on a lot of different scenarios. He said he had always been concerned about the volume of sand, because that was the key indicator for what drives the cost of a beach management plan. He said that the volumes needed for maintenance would have an impact on the budget. Councilman Martin also said that there were scenarios on the conservative side that could reduce the cost of beach maintenance. He said that he also wanted everyone to know that a Beach Management or Maintenance Plan was not new, that now they were having the conversation sooner rather than later. He said there was always beach maintenance planned in our future, and that this Council had numerous conversations around sand volumes, the timeframe, and the financial commitment. He said he would like to see some scenarios from Moffatt & Nichol that were more conservative than what they had been providing. Councilman Martin said he was also concerned that the tax bills were coming due, that people didn't understand the implications for tax bills, and now bills would have to be paid before this issue is resolved. He said they knew how to build financial models, and that they had just done to match a \$20 million grant with no property tax or sand tax increase. He said the assumption was 1 percent growth, and they were already seeing more than that. Councilman Martin asked everyone to just take a breath, because in the end, he thought they would have a good plan that would protect non-conforming properties and keep tax rates down. He said there was time here.

Councilman Bell said that tax values are based on January 1 of any given tax year, so what is due January 5, 2023 was based on the value as of January 1 of 2022.

**David Z. Bodenheimer's Written Comments on Beach Development Plan:  
Oak Island's Town Council Meeting & Public Hearing (October 4, 2022)**

**I. Introduction**

I am David Bodenheimer – a resident at 5119 Minnesota Drive in the South Harbour community.

My comments relate to the Beach Development Plan – a plan that is too hasty, too risky, and too costly. In fact, it is a repeat of the \$140 million sand tax & FEMA engineered beach.

**II. The Beach Development Plan Has Not Been Properly Vetted**

**A. The Plan is Too Hasty**

Moffatt & Nichol (Moffatt) presented its draft Beach Management Plan only a week ago – not enough time for either the Town Council or the OKI citizens to perform any meaningful due diligence. Quite simply, a single week is an unreasonable schedule to vet a 30-year Plan that will cost well in excess of \$140 million, particularly when the Town Council vote and public comment must occur on the same day.

**1. Moffatt Did Not Justify the Compressed Schedule and Urgency**

By compressing the schedule (presentation, public comments, and Council vote) into a single week, the draft Plan appears to have grave urgency. Yet Moffatt offers no facts or figures demonstrating why the public comments and Town Council vote must take place on October 4<sup>th</sup>.

On September 27, 2022, Moffatt & Nichol (Moffatt) gave a presentation summarizing a 63-page draft Beach Management Plan dated September 30, 2022.<sup>1</sup> At the Town Council meeting, Moffatt did not provide the public with copies of either the 63-page draft Plan or the 16-page PowerPoint presentation. The Moffatt draft Plan and PowerPoint presentation did not become available to the public until the next day when the Town Clerk promptly posted them to the OKI Government website.

In the September 27 PowerPoint presentation, Moffatt stated that “Town must develop a long-term (minimum of 30 years) beach maintenance plan.”<sup>2</sup> Under “Next Steps,” Moffatt only offered a single schedule reflecting a Town Council vote and approval of the draft Beach Management Plan by October 4, 2022 – the same day as public comments.

---

<sup>1</sup> 9/27/2022 Town Council Special Meeting regarding “Consideration of Beach Management Plan to be Submitted to the Coastal Resources Commission.” OKI Website ([https://granicus\\_production\\_attachments.s3.amazonaws.com/oakislandnc/7e4ec2a3e9ca5888c32d2f6daff741430.pdf](https://granicus_production_attachments.s3.amazonaws.com/oakislandnc/7e4ec2a3e9ca5888c32d2f6daff741430.pdf)).

<sup>2</sup> 9/27/2022 Town Council Special Meeting; Moffatt Presentation, p. 9.

## Next Steps

- Goal is to have the Beach Management Plan in front of CRC for the November 16<sup>th</sup>-17<sup>th</sup> scheduled meeting (Next Meeting Feb. 22<sup>nd</sup>-23
- Approval of Beach Management Plan
  - Town Council Vote on whether or not to move forward (October 4, 2022)
  - Submit formal BMP to DCM by October 7<sup>th</sup>
  - One month for DCM review and provide Summary and Recommendations to CRC – by November 7<sup>th</sup>
  - Allows time for CRC to put on Agenda for November 16<sup>th</sup>-17<sup>th</sup> meeting
    - Town will orally present BMP to CRC at November meeting
    - DCM will orally present Summary and Recommendation to CRC at November Meeting

9/27/2022 Moffatt Presentation, p. 18.

Notably missing is **any** discussion of what happens if the Town Council chooses to take a reasonable amount of time to receive public comments, gather additional facts, and consider a potential Plan at a later date – such as the Coastal Resources Commission’s (CRC) February 2023 meeting date. In other words, what dire consequences – if any – would occur if the Town took the time to vet this Plan properly? Quite simply, neither the draft Moffatt Plan nor presentation offer any cogent explanation for the undue haste.

### 2. Moffatt Presented an Unreasonably Short Comment Period

Until September 27, 2022, the public did not have any preview of the Moffatt draft Plan or presentation. Although the Town Clerk acted with excellent dispatch in posting both the Plan and the presentation on the very next day (September 28, 2022), the public only received six days to prepare and present comments on the 63-page draft Plan and the 16-page presentation.

Moffatt acknowledges that “Public Outreach and Comments” are mandatory, but then summarily contends that “No comment period time is specified.”

### The Plan Requires Public Outreach and Comments

- Comments must be included in submitted plan
- Need to account for timing of comment period for submission of plan
- M&N will need time to address public comments in the plan
- No comment period time is specified

9/27/2022 Moffatt Presentation, p. 15. While a specific comment period may not be mandated, the absence of a minimum period for public comment does not mean that six days is either right or fair.

Under the current comment period for the draft Plan, the public has only had six days to digest the 63-page report, gather facts, and prepare comments. While not binding on local governments, the federal requirements generally establish at least 30 days as the minimum period of time for the public to comment on federal policies and procedures:

A minimum of 30 days and, normally, at least 60 days will be given for the receipt of comments.

Federal Acquisition Regulation (FAR) § 1-501-2(c). In the absence of some serious urgency or emergency, the citizens of Oak Island deserve the same procedural due process for notice and opportunity to comment as citizens at the federal level.

### 3. Undue Haste Makes Waste

Moffatt's presented schedule for the draft Plan mirrors the undue haste that drove the FEMA-engineered beach and \$140 million tax assessment.

- Moffatt Presentation & Council Vote. The prior Town Council heard the Moffatt briefing on the FEMA-engineered beach on March 16, 2021, and then voted on the same day to proceed with Option 1 for the "Sand Assessment."<sup>3</sup>
- Public Comments. After voting to proceed with the sand assessment, the prior Town Council received public comments on March 23, 2021.<sup>4</sup>
- Council Vote. On April 13, 2021, the prior Town Council (with Councilman Bach opposing) voted to establish municipal service districts as a framework to implement the sand assessment.<sup>5</sup>
- \$137 Million FEMA Beach. On September 14, 2021, the prior Town Council heard that the FEMA-engineered beach would require a long-term commitment (20 years) and would cost not \$40 million, but instead \$137 to \$140 million.<sup>6</sup>

Once the real cost of the FEMA-engineered beach – \$137 to \$140 million – became known, both the FEMA-engineered beach and the \$140 million sand tax died a quick death. However, the prior Town Council, prior Mayor, numerous candidates (several now sitting on the current Council), and hundreds of citizens devoted enormous time and resources to this issue. With the proper due diligence in March 2021, the FEMA-engineered beach and the sand tax would not have been under serious consideration nearly six months later in September 2021. Based upon the lessons of the \$140 million sand tax, the Town Council and the public should get all of the facts first before proceeding further with the Moffatt draft Plan.

---

<sup>3</sup> 3/16/2021 Town Council Meeting Minutes, pp. 1, 3.

<sup>4</sup> 3/23/2021 Town Council Meeting Minutes, pp. 1-5.

<sup>5</sup> 4/13/2021 Town Council Meeting Minutes, p. 11.

<sup>6</sup> 9/8/2021 *State Port Pilot*, "OKI group takes one final look at sand plans," ("If the town goes with a large-scale plan, the potential costs, including maintenance, could be \$140-million over 20 years, the committee noted"); 9/14/2021 Town Council Meeting Minutes, p. 1 (presentation of Rick Barry); p. 6 (comments of David Bodenheimer).

## B. The Plan is Too Risky

In addition to undue haste, the Moffatt draft Plan comes with a number of risks not yet addressed, including the following: (1) a 30-year commitment to an unpredictable State entity; (2) factual gaps in the draft Plan; and (3) unknown legal implications of entering into a 30-year commitment.

### 1. The State Commission Changes its Mind

The very need for this public hearing arose because the State approved the OKI approach in 2016, but then reneged in 2022:

[O]n December 20, 2016, the Town received approval from the North Carolina Coastal Resources Commission (NCCRC) for a Development Line for the Town's oceanfront shoreline.

\* \* \*

As of August 1, 2022, following a formal rulemaking process, the NCCRC eliminated the Development Line as one of its oceanfront management options for establishing the location of oceanfront development activities.<sup>7</sup>

Quite simply, the State Commission has reversed positions, leaving approximately 82% of the beach front properties potentially non-rebuildable.<sup>8</sup> By definition, inconsistent agency positions are arbitrary and capricious, as the Supreme Court has held. *See, e.g., Motor Vehicle Manufacturers Association of the United States v. State Farm Mutual Auto. Ins. Co.*, 463 U.S. 29, 42-43 (1983) (arbitrary and capricious for agency to take positions inconsistent with record or contrary to prior agency positions).<sup>9</sup>

During the September 27 Town Council Meeting, Council members raised the issue of how the Town could be sure that the State Commission would not unexpectedly change positions **after** the Town made the 30-year commitment to the Plan. Moffatt candidly acknowledged this risk, noting that the State Commission could change its mind after the Town committed to the Plan.

Neither the Moffatt draft Plan nor its presentation addresses the risk of the Town making a 30-year commitment, only to spend millions of dollars against this commitment and have the State Commission reverse course again. Before proceeding with the draft Plan, this risk of the State Commission reneging – just as it did in August 2022 – needs to be squarely weighed.

---

<sup>7</sup> 10/4/2022 Town Council Special Meeting Agenda Package attaching 9/30/2022 Moffatt Draft Beach Management Plan, p. 12 (<https://www.oakislandnc.gov/government/clerk/meeting-agendas-minutes-video>).

<sup>8</sup> *Id.*

<sup>9</sup> *See also Islander E. Pipeline Co., LLC v. Connecticut Dep't of Environmental Protection*, 482 F.3d 79, 102 (2d Cir. 2006) ("The [agency's] failure to acknowledge this record evidence directly contradicting its conclusion is arbitrary and capricious."); *Independent Petroleum Association of America v. Babbitt*, 92 F.3d 1248, 1260 (D.C. Cir. 1996) (inconsistent positions are "the very meaning of arbitrary and capricious standard").

## 2. The Facts and Risks Have Not Been Fully Developed

Just one week ago, Moffatt presented its 63-page draft Plan and 16-page presentation. In other words, the fact-finding and review process has just begun. Both the Town Council and citizens deserve a robust record, sufficient time, and well-rounded expertise in order to apply the necessary vetting and scrutiny appropriate to a \$140 million project spanning 30 years or more.

The experience with the FEMA-engineered beach and \$140 million sand tax illustrates the need for conducting more research and tapping broader sources of expertise. First, for a project of this magnitude, the Town needs a broad range of research covering both facts and strategic options:

First and foremost, much more research is needed before jumping into assessing the homeowner immediately for a project of this magnitude. If you look at other beach nourishment projects, there are years of preparation, studies are created, updates occur and all are fluid and continuous in nature. Details involving the beach nourishment projects show that many Federal departments communicate with the Town Council/Commissioners on the project as it's being worked on. **More than just the engineers are involved in meetings.**

\* \* \*

**Oak Island Town Council should not just rely on Moffitt & Nichol as their sole source of information.** They should be gathering information from other sources for a project of this size and cost. Town council should also be performing their own due diligence on this project once all the materials have been gathered.<sup>10</sup>

At this point, the Moffatt draft Plan is a reasonable starting point. However, like the FEMA-engineered beach and \$140 million sand tax, the Town needs “More than just the engineers . . . involved in the meetings.” Just as the Town Council ultimately agreed with the dissenting opinion in the Ad Hoc Beach Nourishment Committee and voted against the FEMA-engineered beach, this Town Council should not be rushed into a vote based upon a single presentation by a single engineering firm. Instead, the Town should look forward to a broader array of sources and expertise to assure that we do not prematurely agree to a 30-year commitment costing over \$140 million. For that price tag, the Town can afford reasonable due diligence.

---

<sup>10</sup> 9/14/2021 Town Council Meeting attaching September 2021 Ad Hoc Beach Nourishment Committee, Dissenting Opinion, pp. 7-8 (emphasis added) ([https://legistarweb-production.s3.amazonaws.com/uploads/attachment/pdf/1064258/Ad\\_Hoc\\_Beach\\_Nourishment\\_Committee\\_Report\\_Final.pdf](https://legistarweb-production.s3.amazonaws.com/uploads/attachment/pdf/1064258/Ad_Hoc_Beach_Nourishment_Committee_Report_Final.pdf)).

### 3. The Draft Plan Does Not Address Potential Legal Issues

Not surprisingly, the Moffatt draft Plan represents an engineering viewpoint that leaves potential legal issues unanswered. These comments do not purport to offer any legal answers or advice, but instead raises some legal questions that may arise if the Town proceeds with a 30-year commitment.

Perhaps the hardest question is what happens if the Town enters into a 30-year commitment and then backs out before the end? Under a theory of a Fifth Amendment partial taking, could the Town end up liable for diminished fair market value to homeowners and developers who bought or built based upon the Town's 30-year commitment. *See United States v. Commodities Trading Corp.*, 339 U.S. 121, 130 (1950) ("The general rule has been that the Government pays **current market value** for property taken") (emphasis added). These comments cannot answer this question, but instead defer to federal and state legal experts, like the North Carolina Institute of Government.

As another difficult question, does the 30-year commitment involve any contractual or quasi-contractual obligations to the State Commission or any other entity? The courts consistently disfavor Government agency maneuvers that take the benefit of the bargain and then switch positions to another party's detriment. *See, e.g., United States v. Winstar Corp.*, 518 U.S. 839, 910 (1996) (affirming breach of contract where Bank Board initially allowed, and then disallowed, recognition of "goodwill" that banks relied upon in merging with failing thrift institutions). Again, these comments do not purport to answer this question, but instead await additional facts and input from legal experts in this arena.

As yet another question, would the Town take federal funds to implement its obligations under the 30-year Plan? If the Town subsequently reneged on its commitment after using federal taxpayer dollars, would some property owners argue that they had been defrauded by the original promise and thus bring a *qui tam* suit under the federal False Claims Act? *See, e.g., Cook County v. United States ex rel. Chandler*, 123 S. Ct. 1239, 1249 (2003) (holding that the civil False Claims Act, 31 U.S.C. § 3729, extends to suits against local governments: "The term 'person' in § 3729 included **local governments** in 1863 and nothing in the 1986 amendments redefined it") (emphasis added). While I have spent many years litigating False Claims Act suits at the federal level, these comments only raise the question that the Town will need to face after due consideration of appropriate guidance from attorneys with the necessary legal expertise.

\* \* \*

In summary, the draft Plan comes with a multitude of risks that have yet to be vetted, including, but not limited to: (1) partner risks (*i.e.*, the State Commission that just reneged on the Town's 2016 development plan); (2) factual unknowns (including risks beyond the scope and engineering expertise of Moffatt); and (3) legal unknowns (none of which the Moffatt draft Plan considers). For these additional reasons, the Town Council should not be rushed into a premature vote before applying the necessary scrutiny and balancing the risks and rewards of making a 30-year commitment to spend over \$140 million.

### C. The Plan is Too Costly

Moffatt states that the Town “must” develop a 30-year Plan, but Moffatt does not disclose the Plan’s 30-year price tag. In fact, the 30-year cost will exceed \$140 million.

#### 1. The 30-Year Price Tag is Over \$140 million

After last week’s meeting on September 27, 2022, I had a discussion with Moffatt about issues not answered in the presentation:

- Draft Plan Availability. I asked if Moffatt’s draft plan and presentation were available to the public. Moffatt said no; that decision was up to the Town.
- 30-Year Cost. I asked if the Moffatt draft Plan addressed the total 30-year cost. Moffatt said no because they are “not economists.”
- FEMA Engineered Beach Metric. I said with last year’s \$40 million FEMA engineered beach, we learned that the real cost was \$140 million. Moffatt said that’s what this Plan would cost.

As Yogi Berra would say, this is *deja vu* all over again. During the debate over the FEMA-engineered beach and sand tax, Moffatt consistently focused upon the short-term cost:

A comprehensive written master plan has not fully been outlined by Moffitt & Nichol; therefore, **the full capital outlay has not been considered**. Currently, the Moffitt & Nichol plan is a presentation to Oak Island to move sand for \$40 million.<sup>11</sup>

Only months later in September 2021 did the Town Council and citizens learn the truth: the real cost of the FEMA-engineered beach and sand tax would be \$140 million.<sup>12</sup>

While Moffatt candidly admitted to me **after** the September 27 presentation that the Plan would cost \$140 million over 30 years, the Town Council cannot base such pivotal decisions upon hallway conversations. Nor can the Town Council and citizens rely upon Moffatt’s 63-page draft Plan and 16-page PowerPoint presentation because Moffatt omitted the 30-year price tag. Without nailing down the 30-year price tag, the Town Council cannot hold a rational debate on this issue, nor can citizens provide meaningful public comment. The \$140 million cost needs to be publicly admitted and advertised. Only then should the Town proceed with public comment and a vote.

---

<sup>11</sup> 9/14/2021 Town Council Meeting attaching September 2021 Ad Hoc Beach Nourishment Committee, Dissenting Opinion, p. 8 (emphasis added) ([https://legistarweb-production.s3.amazonaws.com/uploads/attachment/pdf/1064258/Ad\\_Hoc\\_Beach\\_Nourishment\\_Committee\\_Report - Final.pdf](https://legistarweb-production.s3.amazonaws.com/uploads/attachment/pdf/1064258/Ad_Hoc_Beach_Nourishment_Committee_Report - Final.pdf)).

<sup>12</sup> 9/8/2021 *State Port Pilot*, “OKI group takes one final look at sand plans,” (“If the town goes with a large-scale plan, the potential costs, including maintenance, could be \$140-million over 20 years, the committee noted”); 9/14/2021 Town Council Meeting Minutes, p. 1 (presentation of Rick Barry); p. 6 (comments of David Bodenheimer).

## 2. The Real Cost Will Greatly Exceed \$140 Million

While Moffatt's hallway admission of \$140 million is a useful starting point, it greatly understates the real cost of the draft Plan. For the FEMA-engineered beach, the cost of \$137 to \$140 million only spanned a 20-year period. Rick Barry (Chairman of the Ad Hoc Beach Nourishment Committee) "said looking at it from a 20-year perspective, it is \$137 million to build and maintain an engineered beach."<sup>13</sup> The *State Port Pilot* reported a figure of \$140 million, based upon input from the same Committee:

If the town goes with a large-scale plan, the potential costs, including maintenance, could be \$140-million over 20 years, the committee noted.<sup>14</sup>

In contrast, Moffatt's draft Plan covers a minimum of 30 years – i.e., a decade or more than the 20-year FEMA-engineered beach. Even with a crude straight-line extrapolation, the extra decade for the Moffatt draft Plan would add another \$70 million (\$140 million plus \$70 million = \$210 million) – for a total of over \$210 million.

In 2021 during the FEMA-engineered beach debate, 8% inflation had not yet arrived. During the hallway discussion on September 27, Moffatt admitted that they had not calculated a 30-year lifecycle cost because they are "not economists." Before taking a vote, the Town Council needs to know what the actual 30-year cost will be in today's world of 8% inflation.

## 3. The Engineering Costs Must Be Added

During the discussion of the FEMA-engineered beach, Moffatt presented a slide addressing the engineering fees to support that project:

"\$100 thousand per year in perpetuity"

Stretched over 30 years, that is a hefty fee. Before proceeding with consideration of Moffatt's draft Plan, the Town Council should ask whether Moffatt's fees will be the same – or higher.

During the FEMA-engineered beach debate, the Ad Hoc Beach Nourishment Committee's dissenting report warned that Moffatt had a financial stake in the project:

Moffitt & Nichol are engineers that sell projects for their company. **They are trying to sell the "engineered" plan**, but less than \$40 million can be used to preserve our beach.<sup>15</sup>

---

<sup>13</sup> 9/14/2021 Town Council Meeting Minutes, p. 1 (presentation of Rick Barry).

<sup>14</sup> 9/8/2021 *State Port Pilot*, "OKI group takes one final look at sand plans."

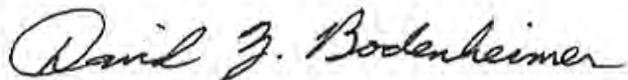
<sup>15</sup> 9/14/2021 Town Council Meeting attaching September 2021 Ad Hoc Beach Nourishment Committee, Dissenting Opinion, p. 8 (emphasis added) ([https://legistarweb-production.s3.amazonaws.com/uploads/attachment/pdf/1064258/Ad\\_Hoc\\_Beach\\_Nourishment\\_Committee\\_Report - Final.pdf](https://legistarweb-production.s3.amazonaws.com/uploads/attachment/pdf/1064258/Ad_Hoc_Beach_Nourishment_Committee_Report - Final.pdf))

As the Ad Hoc Committee's majority opinion noted, Moffatt has a good reputation. Nonetheless, the Town Council needs more than just a single engineering opinion in order to make sound decisions about a project that would cost the Town more than \$140 million. In short, the Town Council and citizens should have a broad spectrum of expertise from established and respected sources before voting on a 30-year commitment with a price tag likely far in excess of \$140 million.

### III. Conclusion

In conclusion, I respectfully request that you give our Town and citizens enough time to get the facts and vet this draft Plan with the reasonable due diligence needed for such a huge and expensive 30-year commitment.

Thank you for this opportunity to share my concerns today.



---

David Z. Bodenheimer

5119 Minnesota Dr., SE, Southport, NC  
3001 W. Beach Dr., Oak Island, NC  
3321 W. Beach Dr., Oak Island, NC  
[dbodenheimer@nicholsliu.com](mailto:dbodenheimer@nicholsliu.com)  
(202) 646-9808

Dated: October 4, 2022

Mike Lavezzo, 3304 W Beach Dr.: I am AGAINST asking the CRC to exempt Oak island from the 1998 vegetation line. This is not what the people voted for last election and nothing has changed. The people spoke that we were fine with putting sand on the beach as we could afford. The move to CRC exempt status is requiring the tax payers to put sand on the beach per orders from an outside commission. This is fulfilling the in perpetuity clause that all of you were against a year or two ago when Moffat and Nichol tried to slip it into the contract. What has changed? I heard Mr. Martin speak of having the most conforming lots - well in five, ten or fifteen years when we do not hold up to the standards demanded by the CRC based on we are a bankrupt town, and our exemption is revoked - how many non-confirming lots will there be? Many more than now and they will be more non confirming than the ones are now - as the presentation by Moffat and Nichol in august showed they will be built closer to the ocean. The bankrupt town will still be sued by those non confirming lot owners/companies. Cut the losses now before they are too great to overcome. Y'all have worked way too hard to get the town in financial stability only to RISK it all for the few who have money to risk. 99% of oak island's population doesn't have the money to risk. The town doesn't have the money to risk. Please don't go down the road to financially destruction of the town and the 99% to please the 1%. Also questions? Mr. Martin never answered me - when did the town get notified of the repeal of the development line from the CRC's meeting in April 2022? When did Moffat and Nichol notify you of this repeal in the April 2022 meeting of the CRC? Why were you notified the end of a July? Why were we notified Aug 16 after it was actively repealed? (I believe the date of active repeal was determined in the June CRC meeting- still waiting to see those minutes). And why were you as a group so quick to spend \$40+k on a rush permit application? These are questions the people you represent want to know answers to. Preferably before you vote on this issue.

# Beach Management Plan Town of Oak Island Request for CRC Approval

History of Oceanfront Development  
&  
Potential Impacts of Granting a Pre-project Line Exception

Public Comments  
Dara Royal  
216 NE 47<sup>th</sup> Street  
Oak Island, NC 28465

## Oceanfront Sections:

1. Ocean Drive 100-1100 Block Slides 9-11
2. E. Beach 6800-7000 & 7400-7800 Block (SE 71<sup>st</sup> – SE 74<sup>th</sup>) Slides 12-14  
(SE 58<sup>th</sup> – SE 67<sup>th</sup>) Slide 16
3. E. Beach 4000-5500 Block Slides 17-20
4. E. Beach 2500-3700 Block Slides 21-23
5. E. Beach 1600-2200 Block Slides 24-26
6. E. Beach 100-1400 Block Slides 27-29
7. W. Beach 100-2300 Block Slides 30-33
8. W. Beach 2500-3900 Block Slides 34-36
9. W. Beach 4200 Block Slide 37
10. W. Beach 4500-6000 Block Slides 38-40
11. W. Beach 6000-7000 Block Slides 41-44

# Information Provided for Each Oceanfront Section

## Aerial Photos:

Structures

Pre-project Line (Green Static Vegetation Line)

Unvegetated Beach Area Measurement Line (Red)

Oceanfront Setback Factors and Distance in Feet by Year

Lot Depths

## Charts, Tables, etc.:

Beach Nourishment Projects by Year

Number of Structures Built by Year

Structure Heated Square Feet by Year

Street-side Setback by Year

Structure Types

Potential for Single-family residential tear down & replacement

Number of Vacant Lots/Parcels

## Additional Information:

Beach Nourishment Projects by Year Location Volume Slides 5-7

Pre-project Line a.k.a. Static Vegetation Line Slide 8

2,000 Square Foot Exception Slide 15

Summary Structures Built by Year Slides 45-47

Hurricanes/Tropical Storms 1984-2021 Slide 48

Beach Nourishment Funding Sources West End Projects & Other Single Projects Slide 49

Beach Nourishment Funding Sources “Initial Project Master Plan” Slide 50

Excerpts 2017 Town of Oak Island Comprehensive Land Use Plan Slide 51

Excerpts CRC-21-34 and CRC-22-12 Slide 52

About Dara Royal Slide 53

### **Sources:**

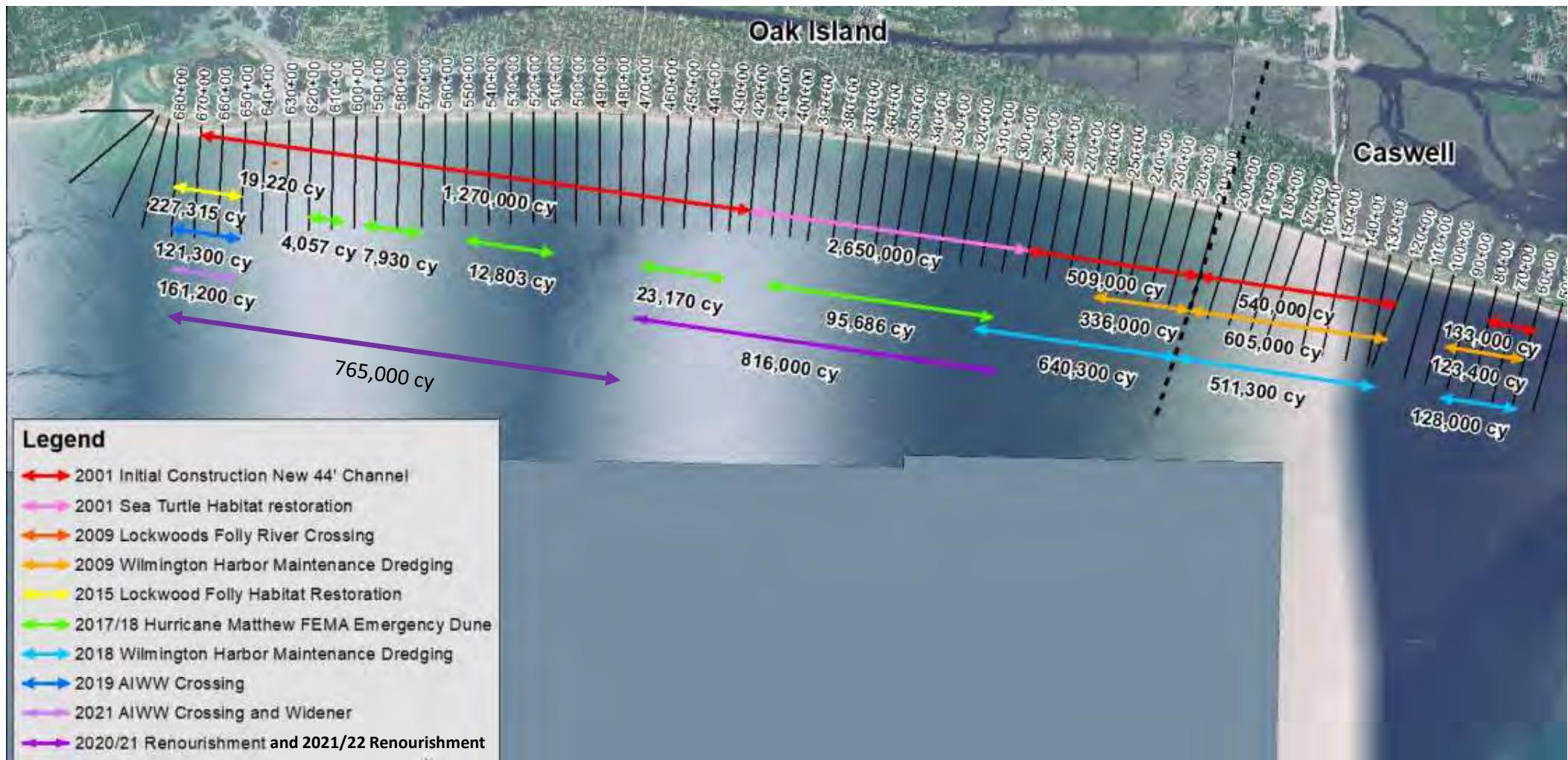
Brunswick County Property Tax Records (thru 2021)

NC Division of Coastal Management Maps

Coastal Resources Commission Agenda Memos

Town of Oak Island Website

# Oak Island Beach Nourishment Projects: Year – Location - Volume



# Oak Island Beach Nourishment Projects: Year – Location - Volume

YEAR	Project Name	Location	Cubic Yards
2001	Wilmington Harbor	Town Limits to SE 63 <sup>rd</sup>	509,000
2001	Sea Turtle Habitat	SE 63 <sup>rd</sup> to 19 <sup>th</sup> Place East	2,650,000
2001	Wilmington Harbor	19 <sup>th</sup> Place East to 6700 Block West	1,270,000
			<b>4,429,000</b>

YEAR	Project Name	Location	Cubic Yards
2009	Wilmington Harbor	Town Limits to SE 74 <sup>th</sup>	509,000
2017/18	FEMA Emergency Dune	5 Areas SE 58 <sup>th</sup> to 51 <sup>st</sup> Place West	143,646
2018	Wilmington Harbor	Town Limits to SE 58 <sup>th</sup>	640,300
2021	FEMA Phase I Dune	SE 63 <sup>rd</sup> to 3 <sup>rd</sup> Place East	816,000
2022	FEMA Phase II Dune	3 <sup>rd</sup> Place East to Point Parking Lot	765,000
			<b>2,873,946</b>

Note: Town Emergency Beach Bulldozing Project after Hurricane Isaias in 2020

# Oak Island Beach Nourishment Projects: Year – Location - Volume

## West End Projects Related to Lockwood Folly Inlet

YEAR	Project Name	Location	Cubic Yards
2009	Lockwood Folly Crossing	57 <sup>th</sup> Place West	19,220
2015	Eastern Channel (LFHR)	6025 W. Beach to Point Parking Lot	227,315
2019	AIWW Crossing	6025 W. Beach to Point Parking Lot	121,300
2021	AIWW Crossing & Widener	6025 W. Beach to Point Parking Lot	161,200
			<b>529,035</b>

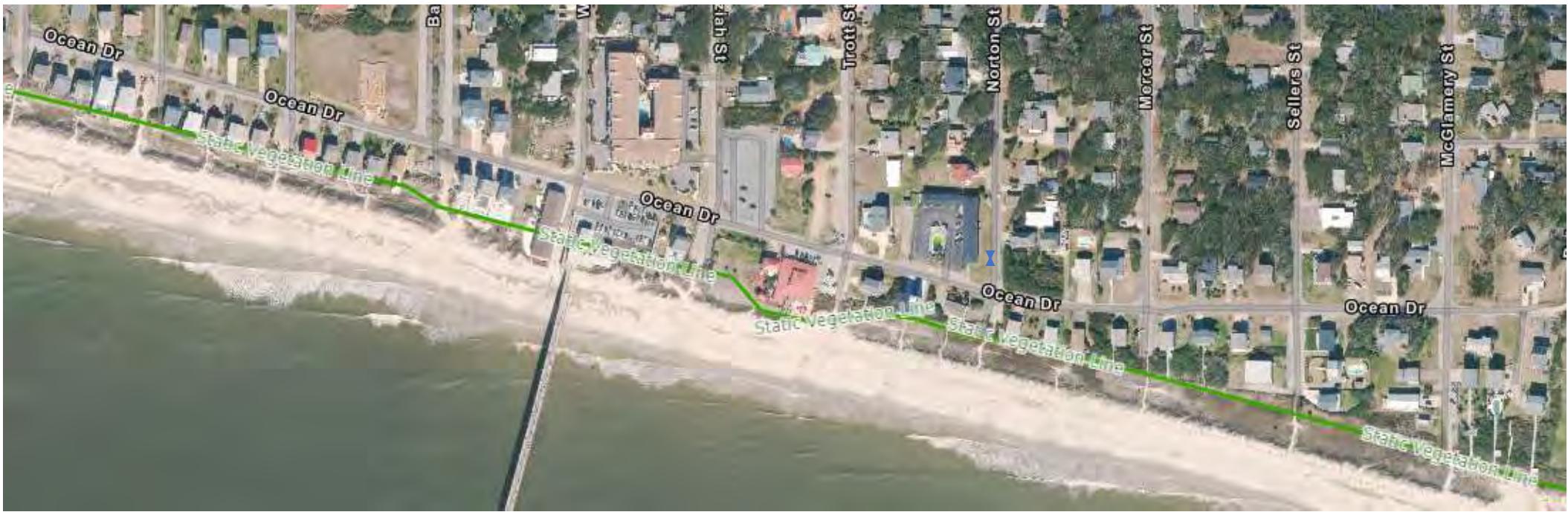
## Pre-project Line a.k.a. Static Vegetation Line 1998 Vegetation Line and 1/18/2021 Addition

15A NCAC 07H .0305 (6)

“Because the impact of Hurricane Floyd in September 1999 caused significant portions of the vegetation line in the Town of Oak Island ... to be relocated landward of its pre-storm position, the pre-project line for areas landward of the beach fill construction in the Town of Oak Island ..., the onset of which occurred in [2001], shall be defined by the general trend of the vegetation line established by the Division of Coastal Management from June 1998 aerial orthophotography.”

Oceanfront setbacks were subsequently measured from the 1998 static vegetation line until the Development Line requested by the Town of Oak Island and approved by the CRC became effective in December 2016. This static vegetation line started at the Oak Island Town Limits with Caswell Beach on the east and stopped at the private oceanfront beach access for 6024 W. Beach Drive (“Red Roof Inn” on 2<sup>nd</sup> row).

A static vegetation line dated 1/18/2021 which starts at 6025 W. Beach Drive and stops at 7005 W. Beach Drive resulting from the 2022 FEMA Phase II Dune Project is shown on the DCM maps but does not appear on the Town of Oak Island maps.

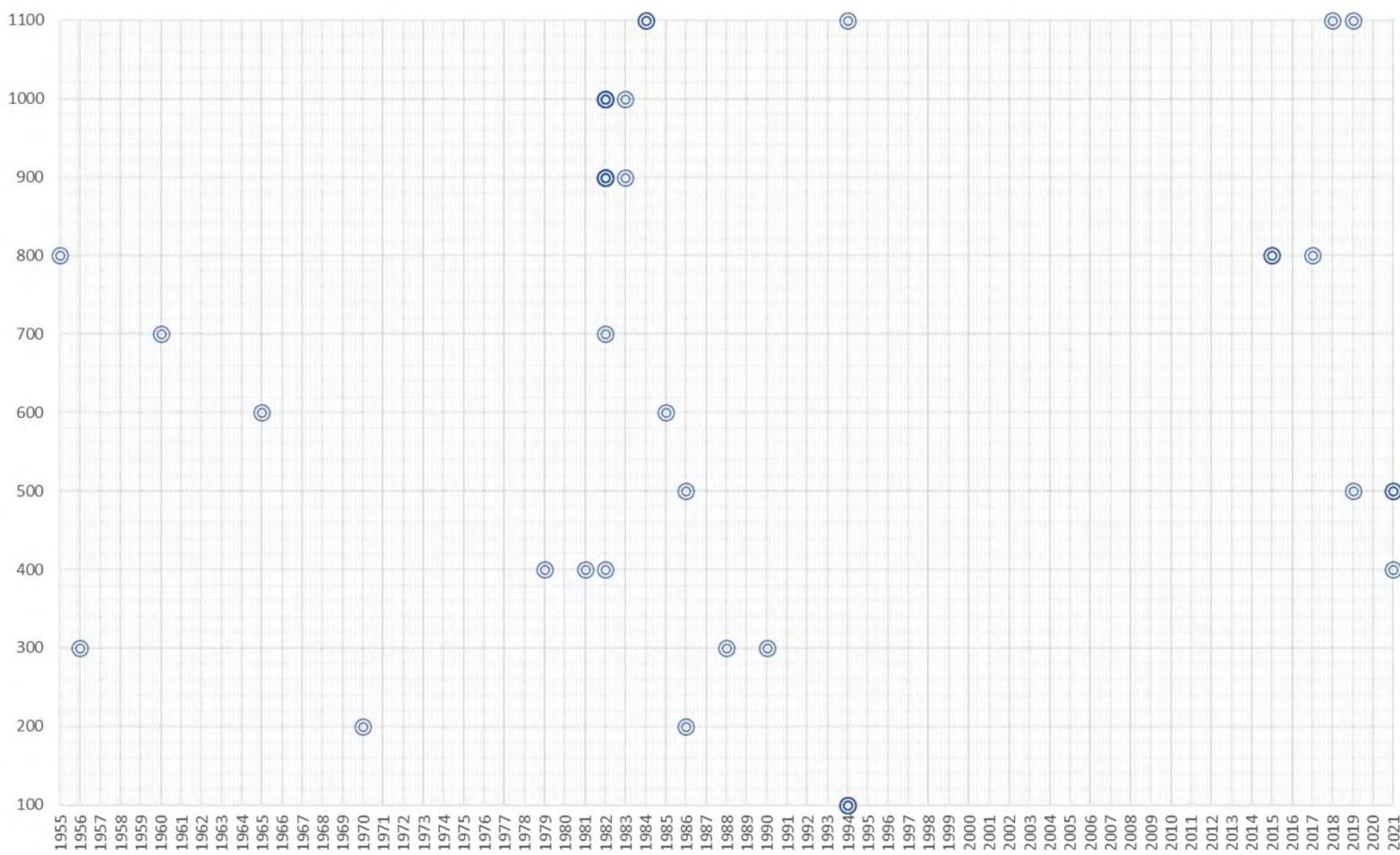


Typical lot depth 150 feet

Ocean Drive 500 – 1100 Block			Ocean Drive 100 – 400 Block		
	Setback Factor	Distance in Feet		Setback Factor	Distance in Feet
1983	4	120	1983	5	150
1997	4.5	135	1997	6	180
2004	4	120	2004	5	150
2013	2	60	2013	2	60

Beach Nourishment  
Wilmington Harbor  
2001  
2009  
2018

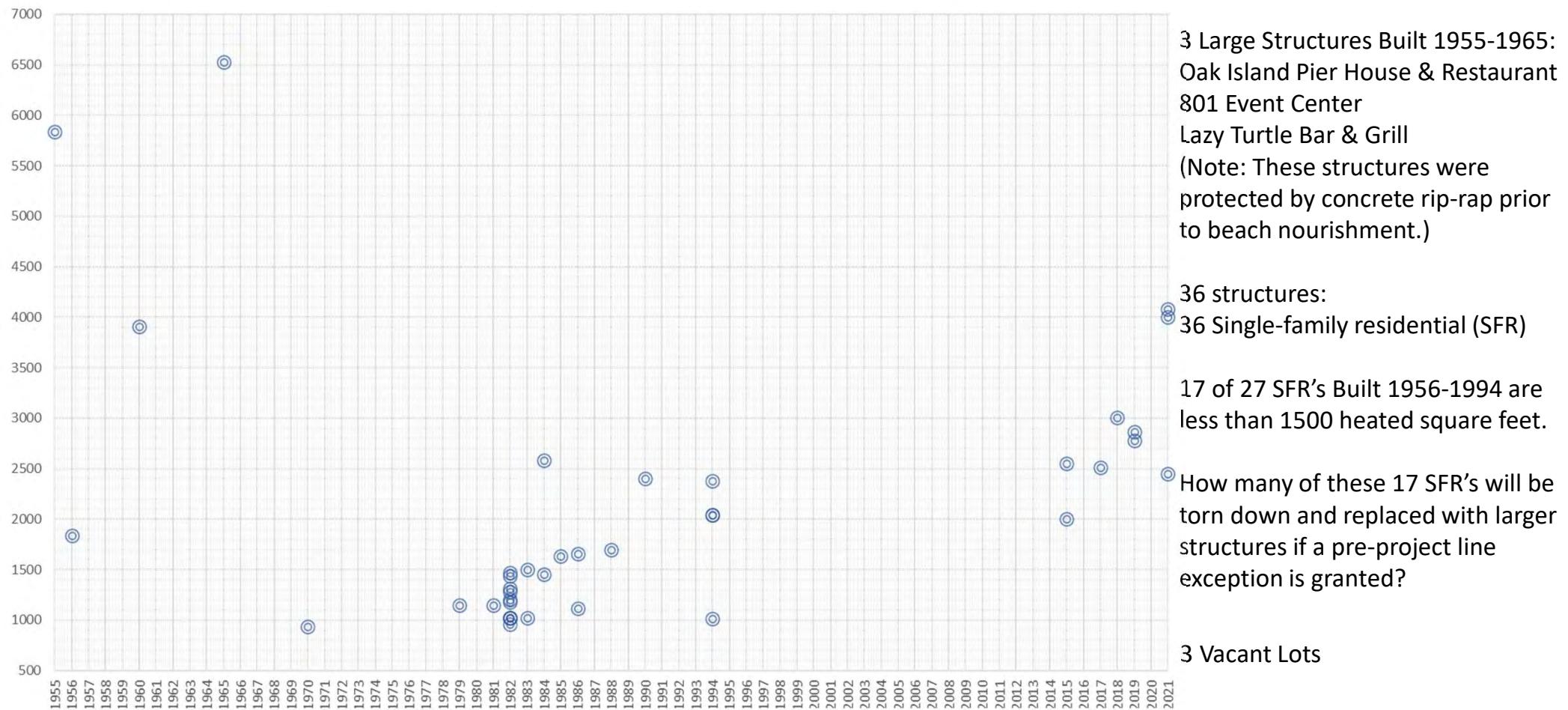
## Ocean Drive 100–1100 Block Structures Built By Year

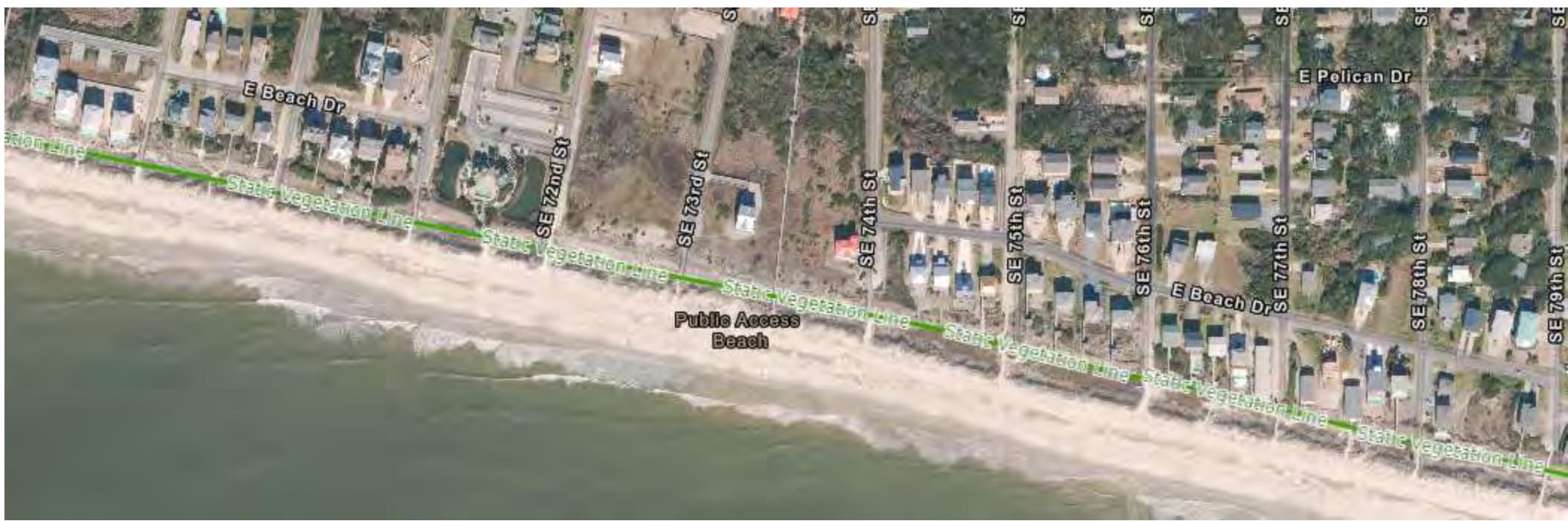


Year	Number
1955-1982	17
1983-1994	13
2015	2
2017-2021	7
Total	39

Street-side setback:  
 Prior to 2010 - 25 feet  
 2010 – Reduced to 20 feet  
 2014 - Reduced to 15 feet  
 2018 – 15 feet but may be reduced up to ten feet to accommodate dune line

## Ocean Drive 100-1100 Block Structure Heated Square Feet by Year





#### E. Beach 6800-7000 Block

Setback Factor Distance in Feet

1983	3	90
1997	3	90
2004	2	60
2013	2	60

#### Lot depths range from 150-250 feet

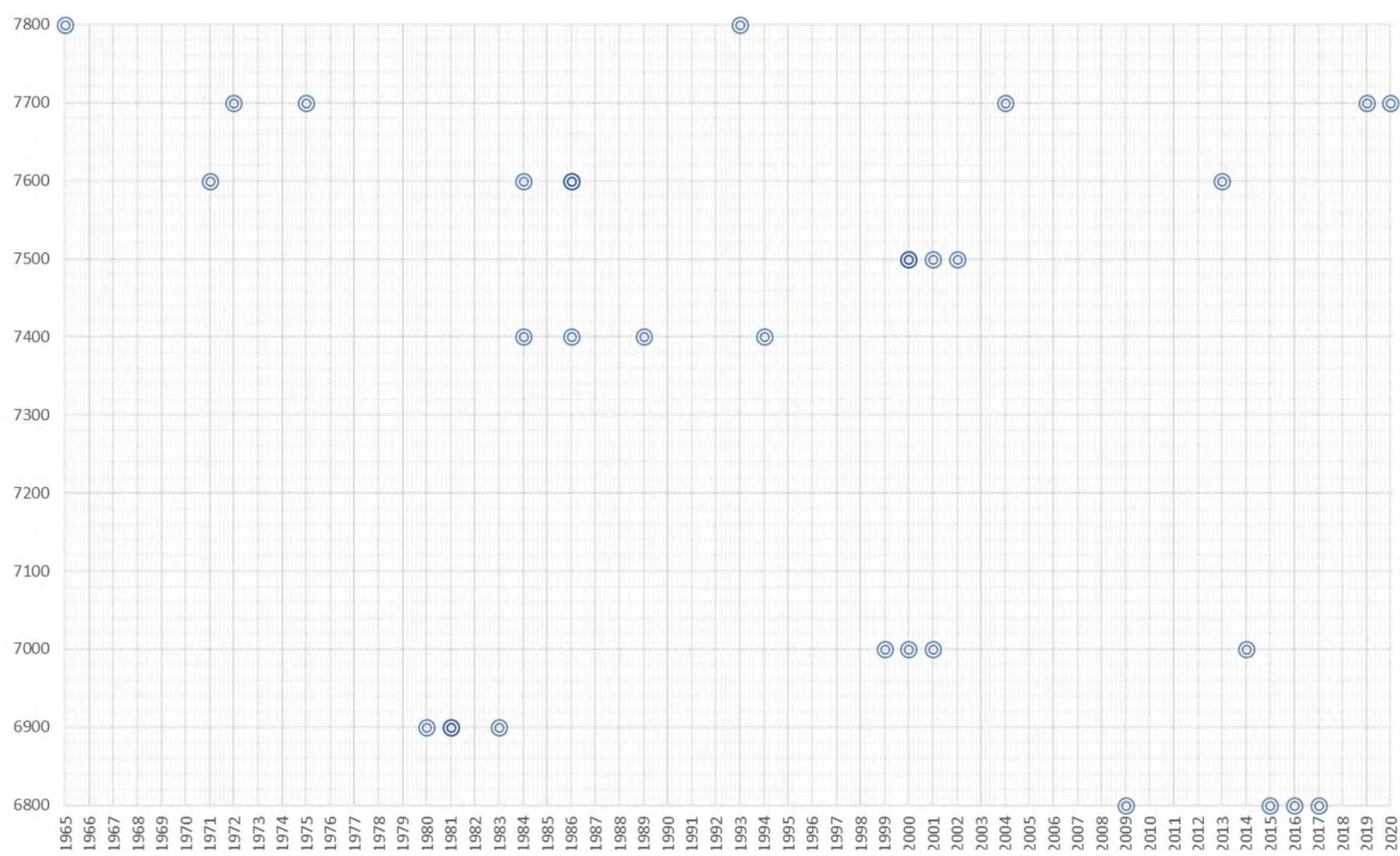
Beach Nourishment  
Wilmington Harbor  
2001  
2009  
2018

#### E. Beach 7400-7800 Block

Setback Factor Distance in Feet

1983	4	120
1997	4.5	135
2004	4	120
2013	2	60

## E. Beach 6800-7000 & 7400-7800 Block Structures Built By Year

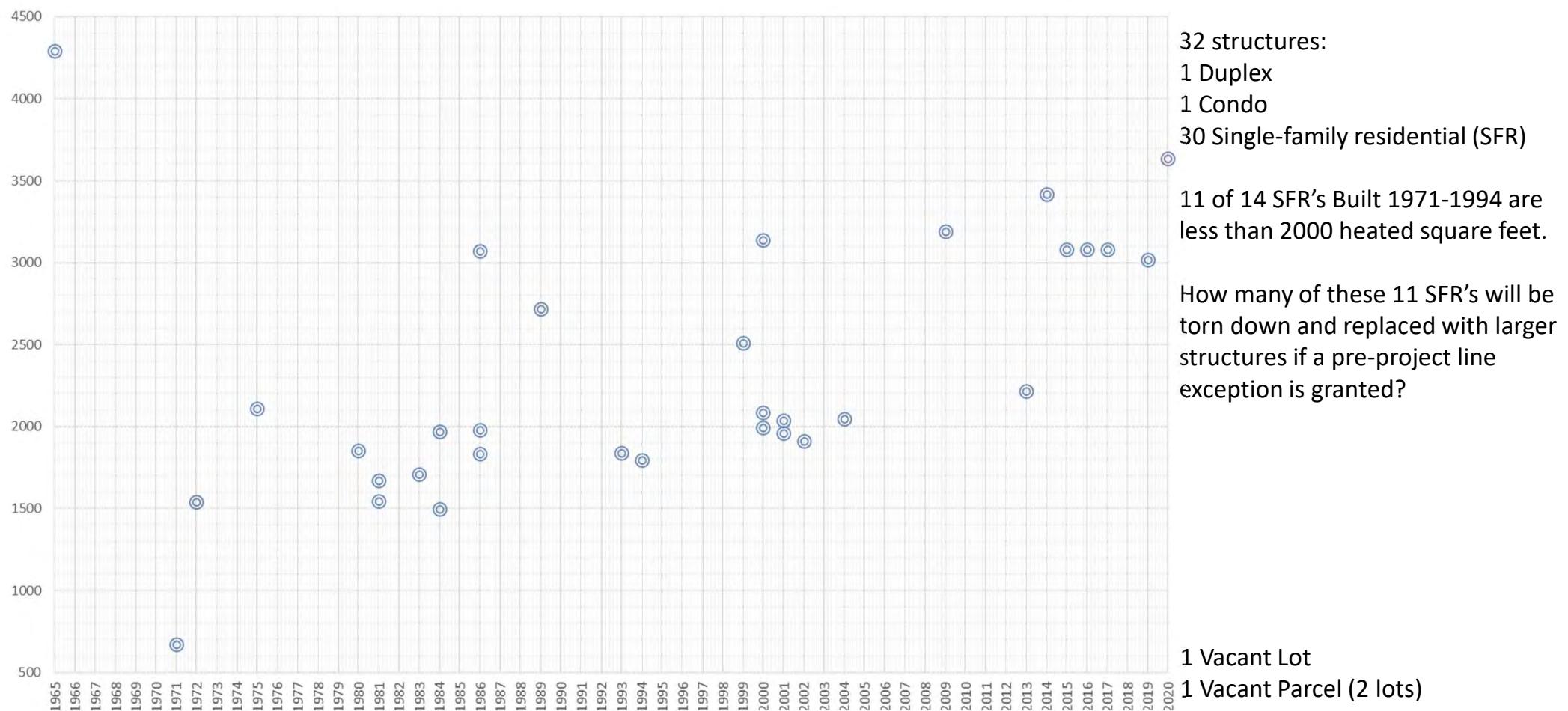


Year	Number
1965-1994	16
1999-2016	13
2017-2020	3
Total	32

Street-side setback:  
 Prior to 2010 - 30 feet  
 2010 – Reduced to 20 feet  
 2014 - Reduced to 15 feet  
 2018 – 15 feet but may be reduced up to ten feet to accommodate dune line

About SE 71<sup>st</sup> to SE 74<sup>th</sup>:  
 SE 71<sup>st</sup>-SE 72<sup>nd</sup> St James Beach Club  
 SE 72<sup>nd</sup>-SE 73<sup>rd</sup> Deep Oceanfront Lots  
 SE 73<sup>rd</sup>-SE 74<sup>th</sup> Access for East Beach Subdivision  
 No impact if pre-project line exception is granted or not granted

## E. Beach 6800-7000 & 7400-7800 Block Structure Heated Square Feet by Year



## 2,000 Square Foot Exception

Some homes were built in areas with oceanfront setback factors greater than 2 and setback distances greater than 60 feet by using the 2,000 square foot exception.

### 15A NCAC 07H .0309 Exceptions

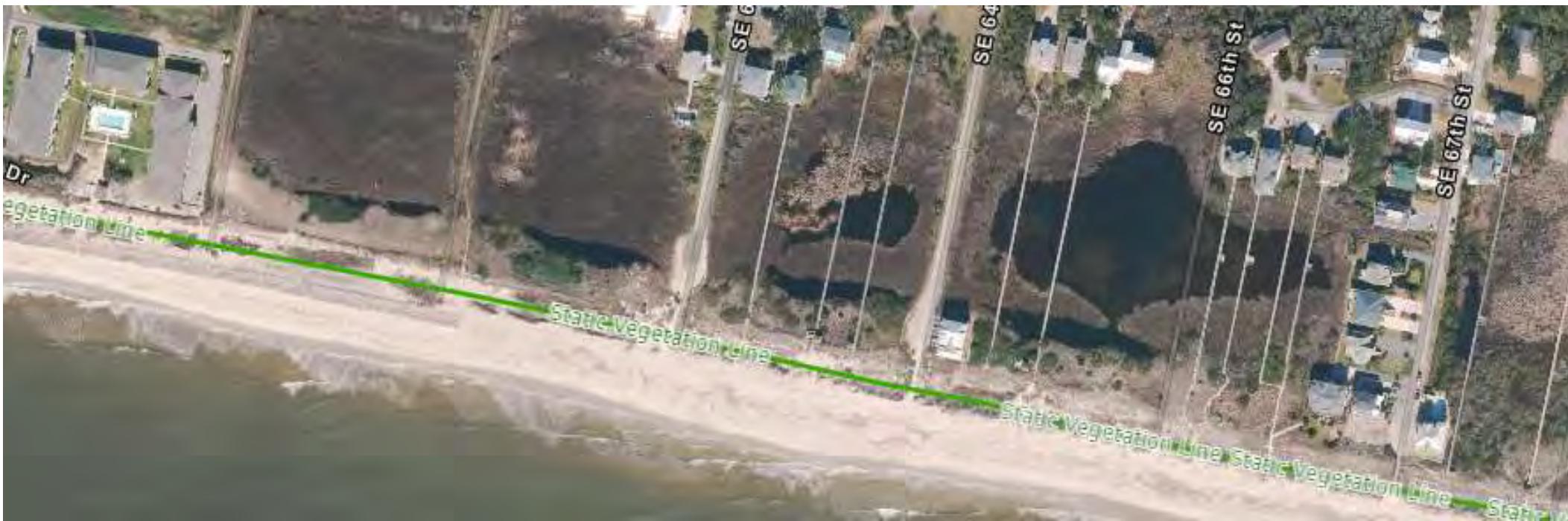
(b) Where application of the oceanfront setback requirements of Rule .0306(a) of this Section would preclude placement of a structure on a lot existing as of June 1, 1979, the structure shall be permitted seaward of the applicable setback line ... if each of the following conditions are met:

(2) The development is at least 60 feet landward of the vegetation line, measurement line, or pre-project vegetation line, whichever is applicable;

(4) The development incorporates each of the following design standards, which are in addition to those required by Rule .0308(d) of this Section;

(B) The footprint of the structure shall be no more than 1,000 square feet, and the total floor area of the structure shall be no more than 2,000 square feet. For the purpose of this Section, roof-covered decks and porches that are structurally attached shall be included in the calculation of footprint;

Note: All setback factors were reduced to 2 and setback distances were reduced to 60 feet in 2013 as a result of beach nourishment projects in 2001 which masked the underlying long-term erosion rate.



SE 58 <sup>th</sup> to SE 67 <sup>th</sup>		
	Setback Factor	Distance in Feet
1983	3	90
1997	3	90
2004	2	60
2013	2	60

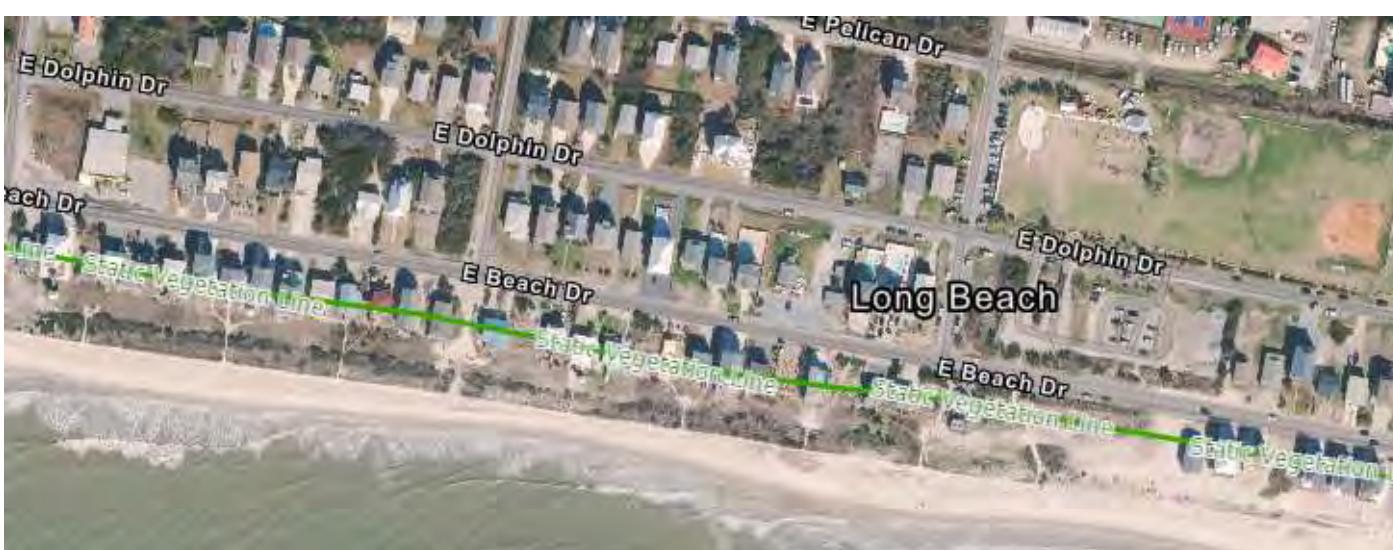
Beach Nourishment  
Wilmington Harbor  
2001  
2018

SE 58<sup>th</sup>-59<sup>th</sup> Southern Shore Villas

SE 59<sup>th</sup> –SE 61<sup>st</sup> 3 vacant parcels

SE 61<sup>st</sup>-SE 67<sup>th</sup> Turtle Creek with  
deep oceanfront lots

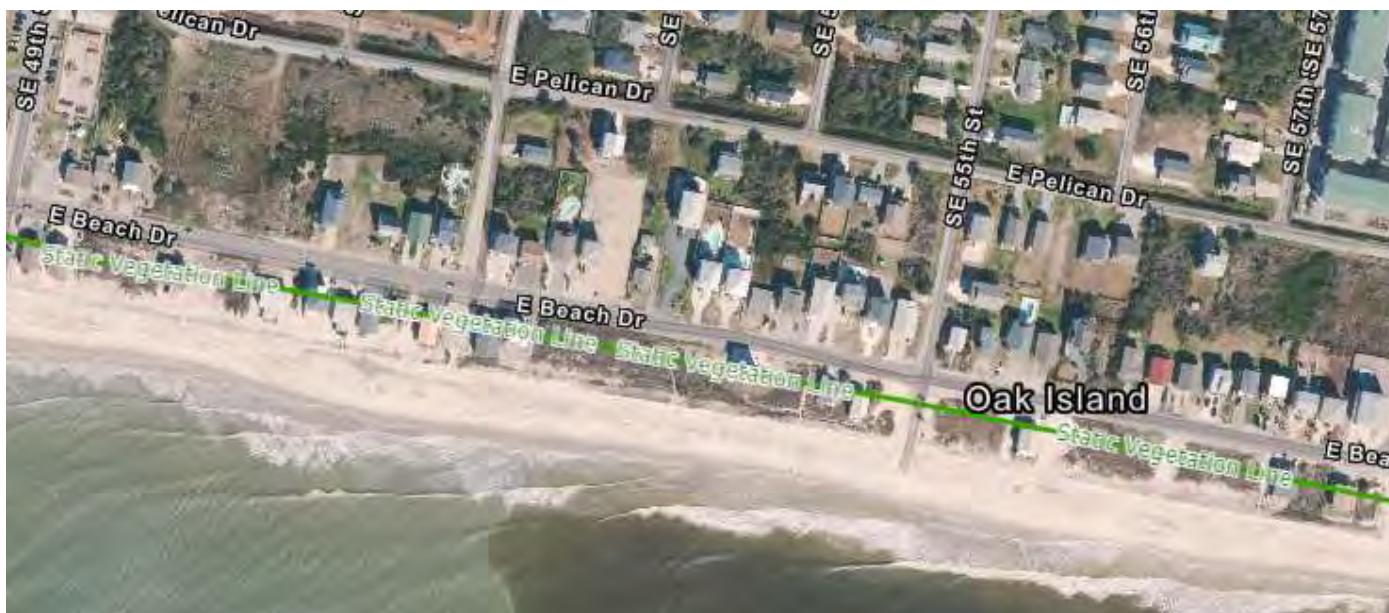
No impact if pre-project line  
exception is granted or not granted



SE 40<sup>th</sup> to SE 49<sup>th</sup>  
E. Beach 4000-4600 Block  
Lot depth 150 feet

Setback Factor 1983 to Present = 2  
Distance in Feet = 60

Beach Nourishment:  
Sea Turtle Habitat Project 2001  
FEMA Phase I Dune Project 2021



SE 49<sup>th</sup> to SE 58<sup>th</sup>  
E. Beach 4900-5500 Block  
Lot depth 150 feet

Setback Factor 1983 to Present = 2  
Distance in Feet = 60

Beach Nourishment:  
Sea Turtle Habitat Project 2001  
FEMA Phase I Dune Project 2021



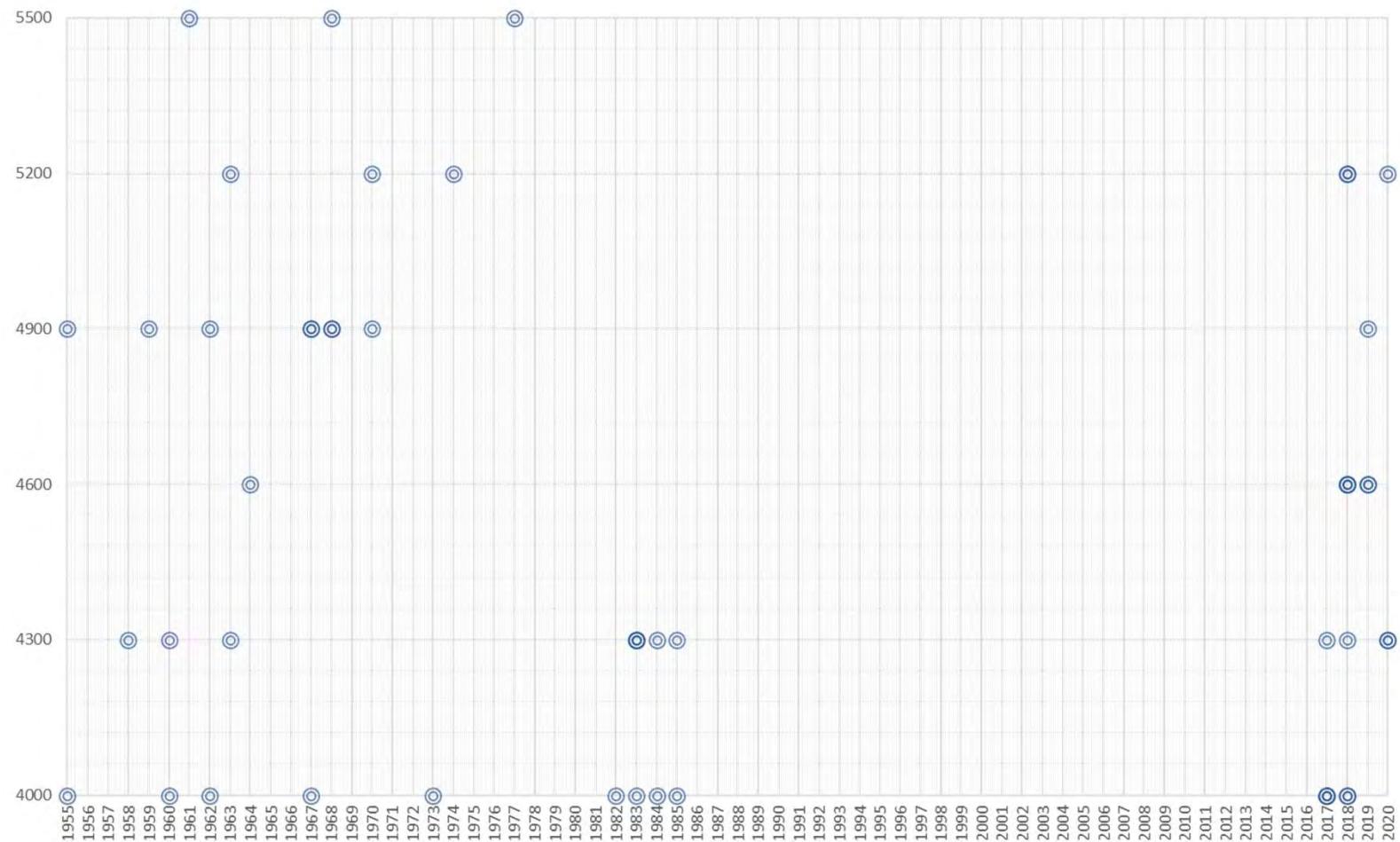
## Oak Island Shoreline circa 1988

Low Tide

- Ocean Crest Pier
- Cabana Gazebo & Parking Lot
- SE 55<sup>th</sup> Street Public Beach Access

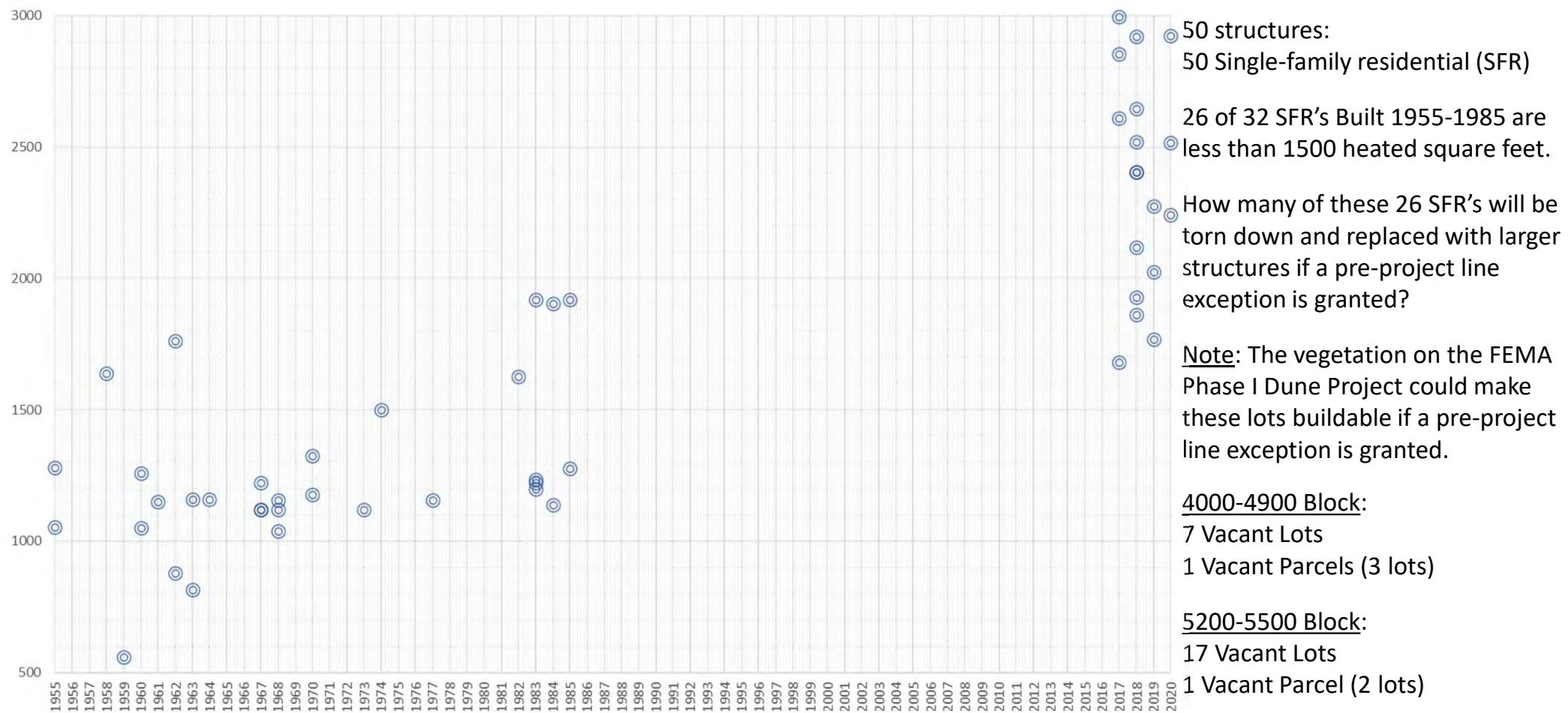
Many of these houses with bulkheads and sandbags  
were destroyed by Hurricane Floyd in 1999

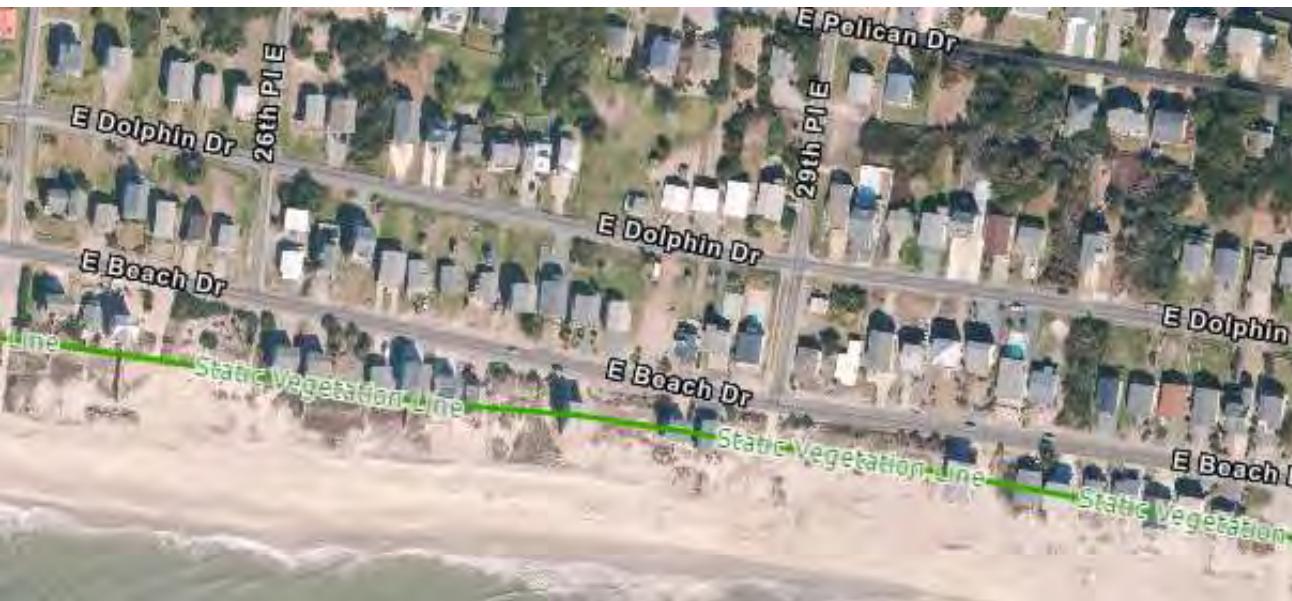
## E. Beach 4000-5500 Block Structures Built By Year



Street-side setback:  
 Prior to 2010 - 30 feet  
 2010 – Reduced to 20 feet  
 2014 - Reduced to 15 feet  
 2018 – 15 feet but may be reduced up to ten feet to accommodate dune line

## E. Beach 4000-5500 Block Structure Heated Square Feet by Year

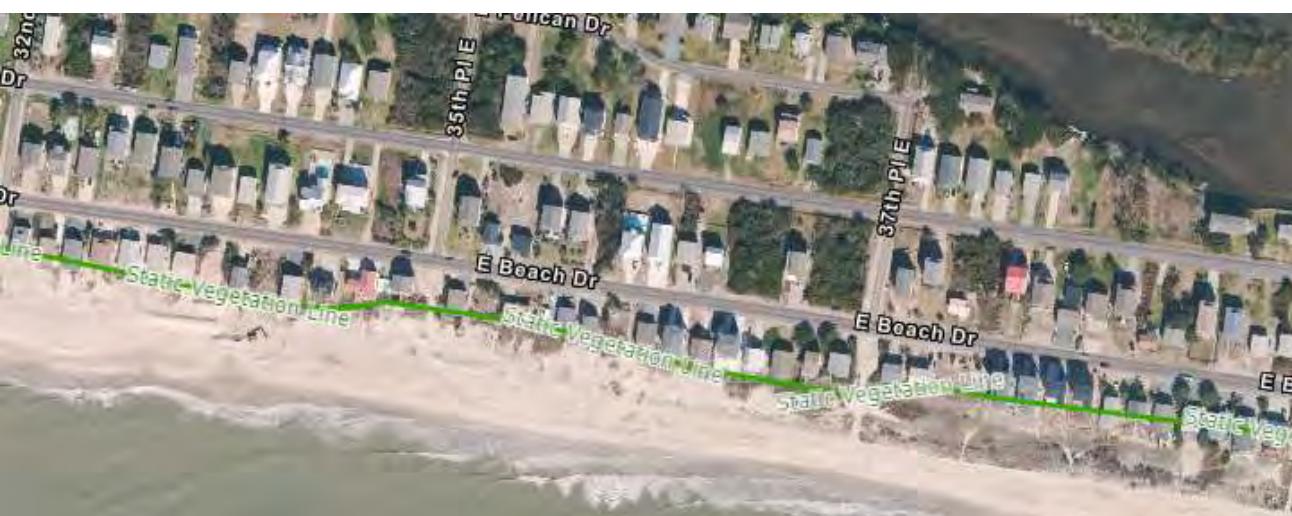




25<sup>th</sup> Place East to 32<sup>nd</sup> Place East  
E. Beach 2500-2900 Block  
Lot depth tapers 250 to 150 feet

Setback Factor 1983 to Present = 2  
Distance in Feet = 60

Beach Nourishment:  
Sea Turtle Habitat Project 2001  
FEMA Phase I Dune Project 2021

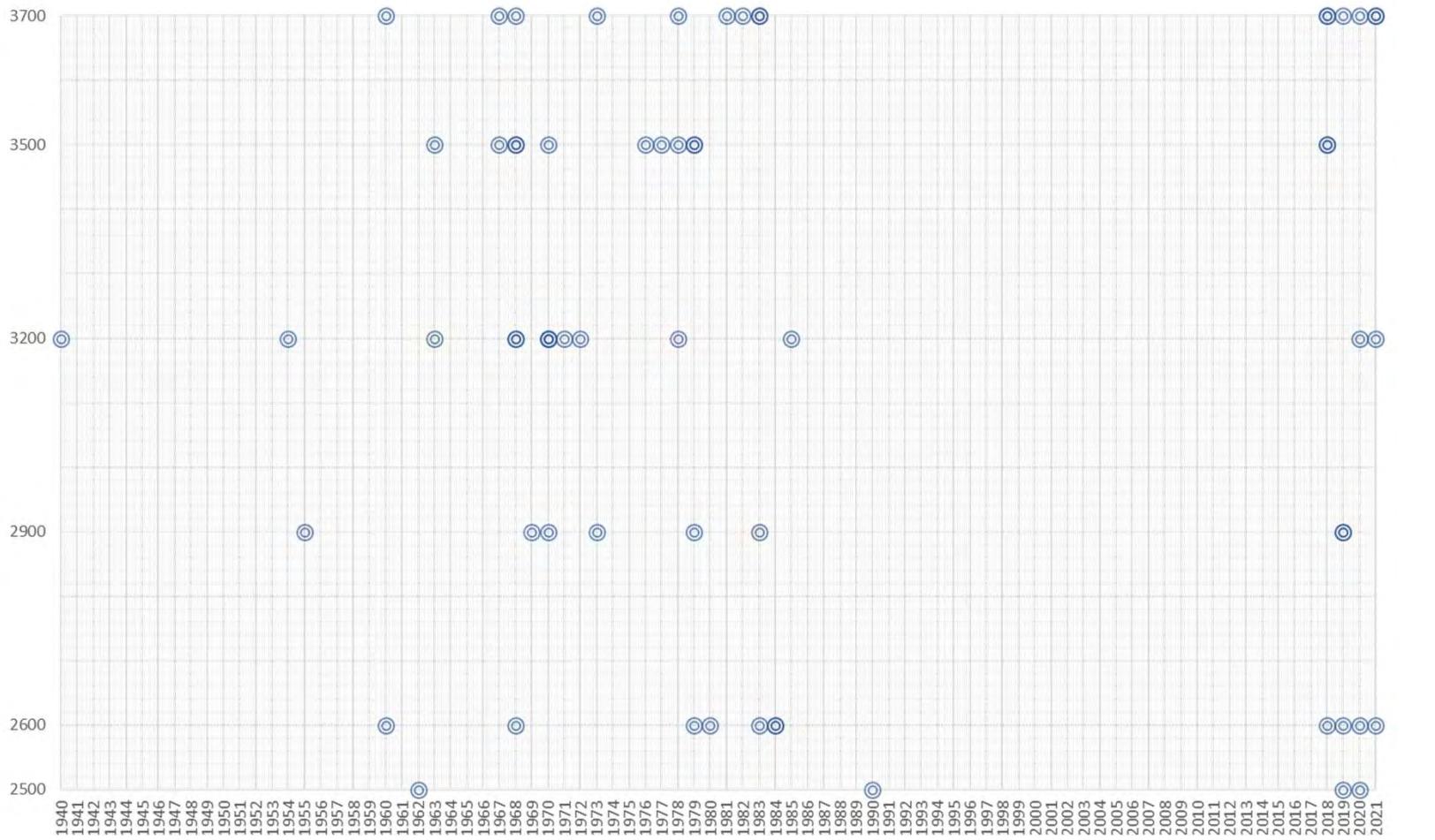


32<sup>nd</sup> Place East to SE 40<sup>th</sup>  
E. Beach 3200-3700 Block  
Lot depth 150 feet

Setback Factor 1983 to Present = 2  
Distance in Feet = 60

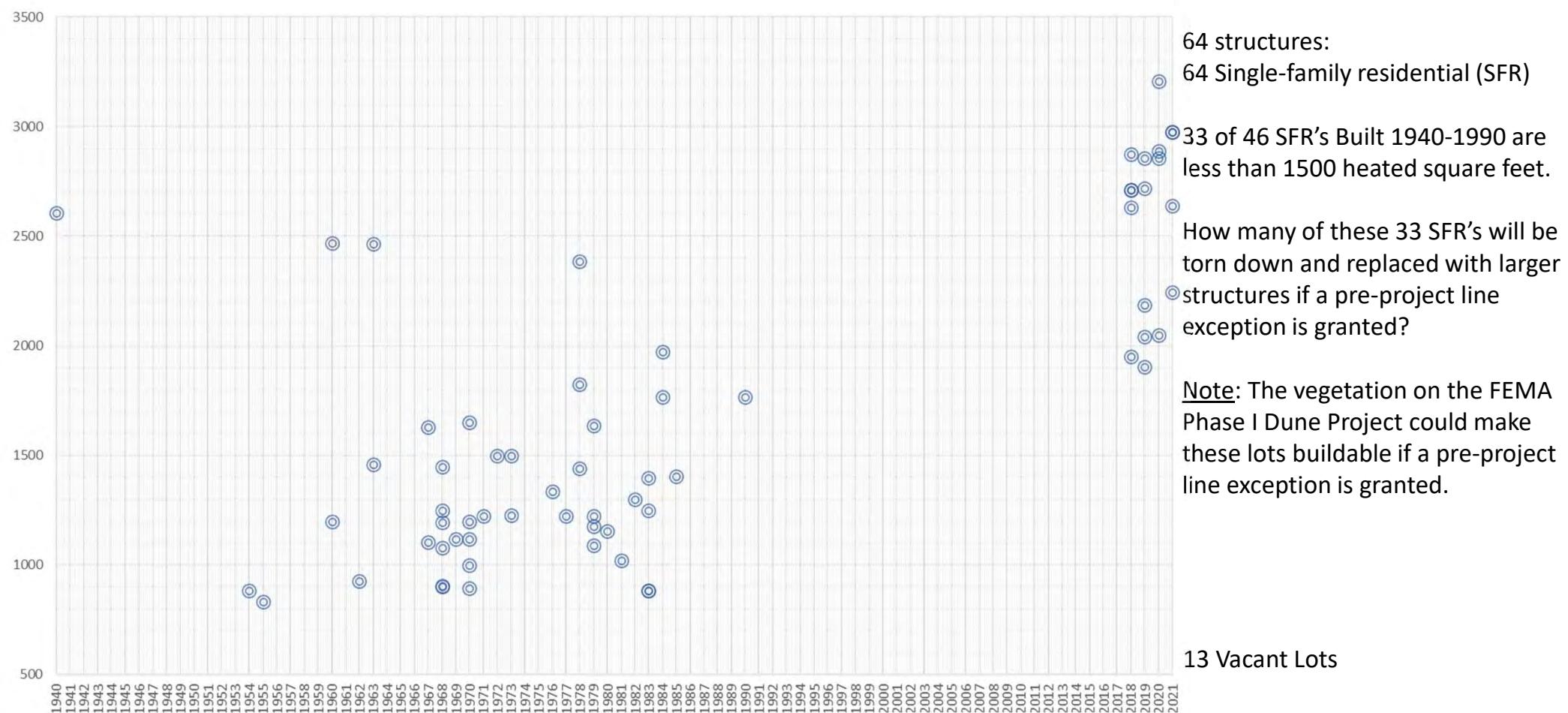
Beach Nourishment:  
Sea Turtle Habitat Project 2001  
FEMA Phase I Dune Project 2021

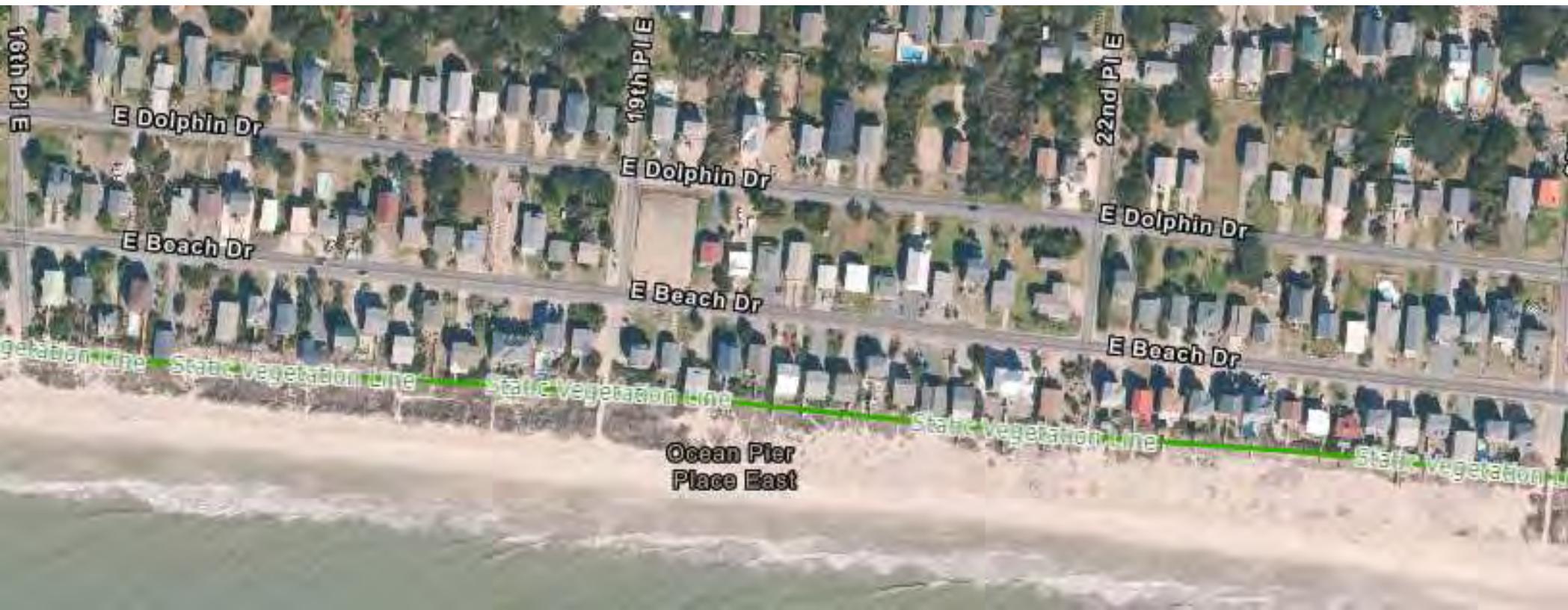
## E. Beach 2500-3700 Block Structures Built By Year



Street-side setback:  
 Prior to 2010 - 30 feet  
 2010 – Reduced to 20 feet  
 2014 - Reduced to 15 feet  
 2018 – 15 feet but may be reduced up to ten feet to accommodate dune line

## E. Beach 2500-3700 Block Structure Heated Square Feet by Year





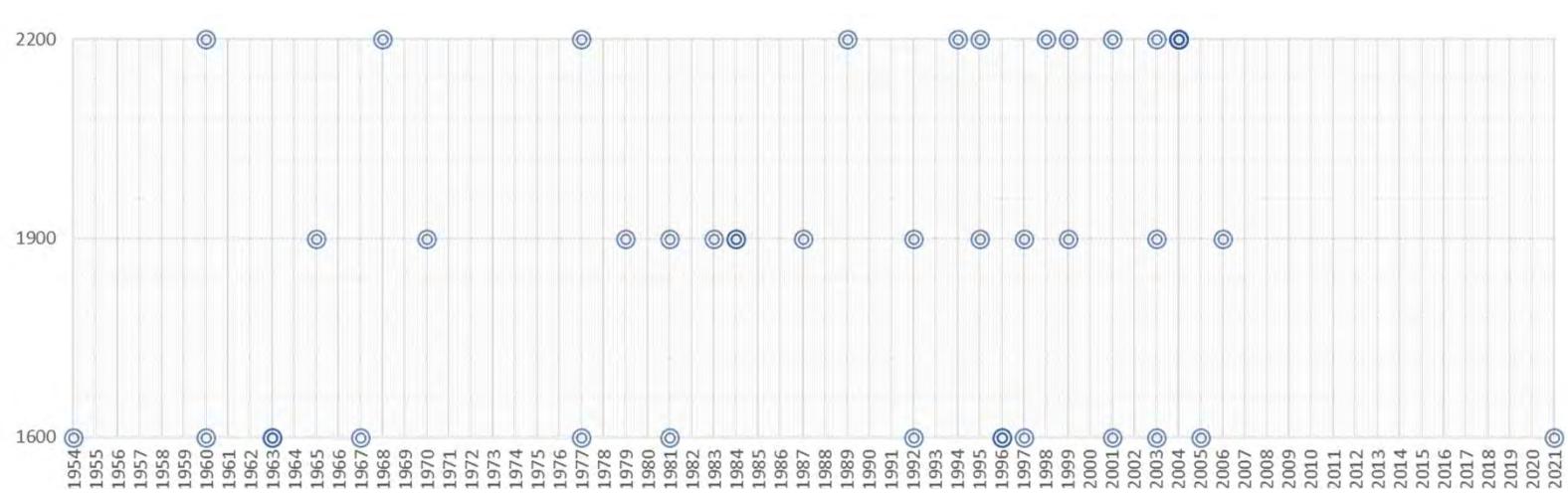
16<sup>th</sup> Place East to 25<sup>th</sup> Place East  
E. Beach 1600-2200 Block

**Lot depth 250 feet**

Setback Factor 1983 to Present = 2  
Distance in Feet = 60

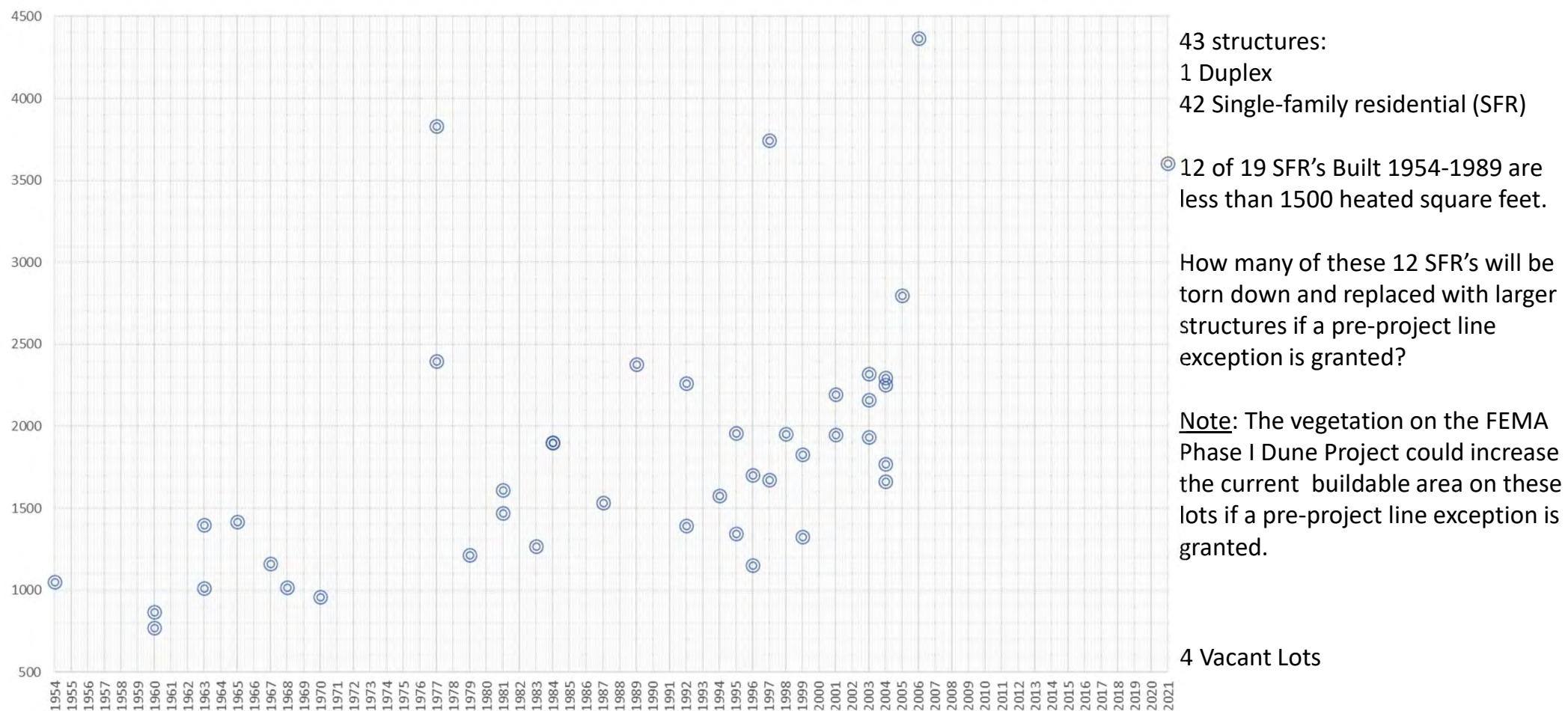
Beach Nourishment:  
Wilmington Harbor 2001  
Dune Taper Sea Turtle Habitat Project 2001  
FEMA Phase I Dune Project 2021

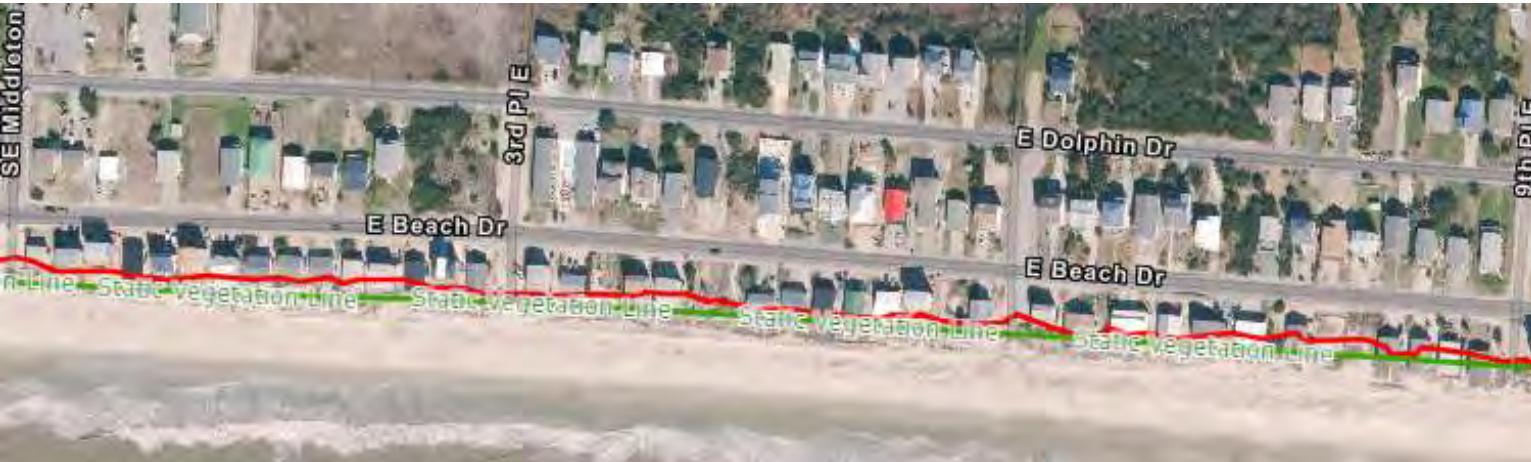
## E. Beach 1600-2200 Block Structures Built By Year



Street-side setback:  
 Prior to 2010 - 30 feet  
 2010 – Reduced to 20 feet  
 2014 - Reduced to 15 feet  
 2018 – 15 feet but may be reduced up to ten feet to accommodate dune line

## E. Beach 1600-2200 Block Structure Heated Square Feet by Year





Measurement Line (Red) in effect April 2021 from Hurricane Isaias in August 2020  
 1429 E. Beach to 2357 W. Beach and from 6601 W. Beach to 6725 W. Beach  
 178 of 191 structures could not meet minimum setback from the pre-storm vegetation line in January 2019

Middleton to 9<sup>th</sup> Place East  
 E. Beach 100-600 Block  
 Lot depth 150 feet

Setback Factor 1983 to Present = 2  
 Distance in Feet = 60

Beach Nourishment:  
 Wilmington Harbor 2001  
 FEMA Phase I Dune Project 2021  
 FEMA Phase II Dune Project 2022

Note: The vegetation on the FEMA Phase I & II Dune Projects could re-establish the vegetation line seaward of the Measurement Line

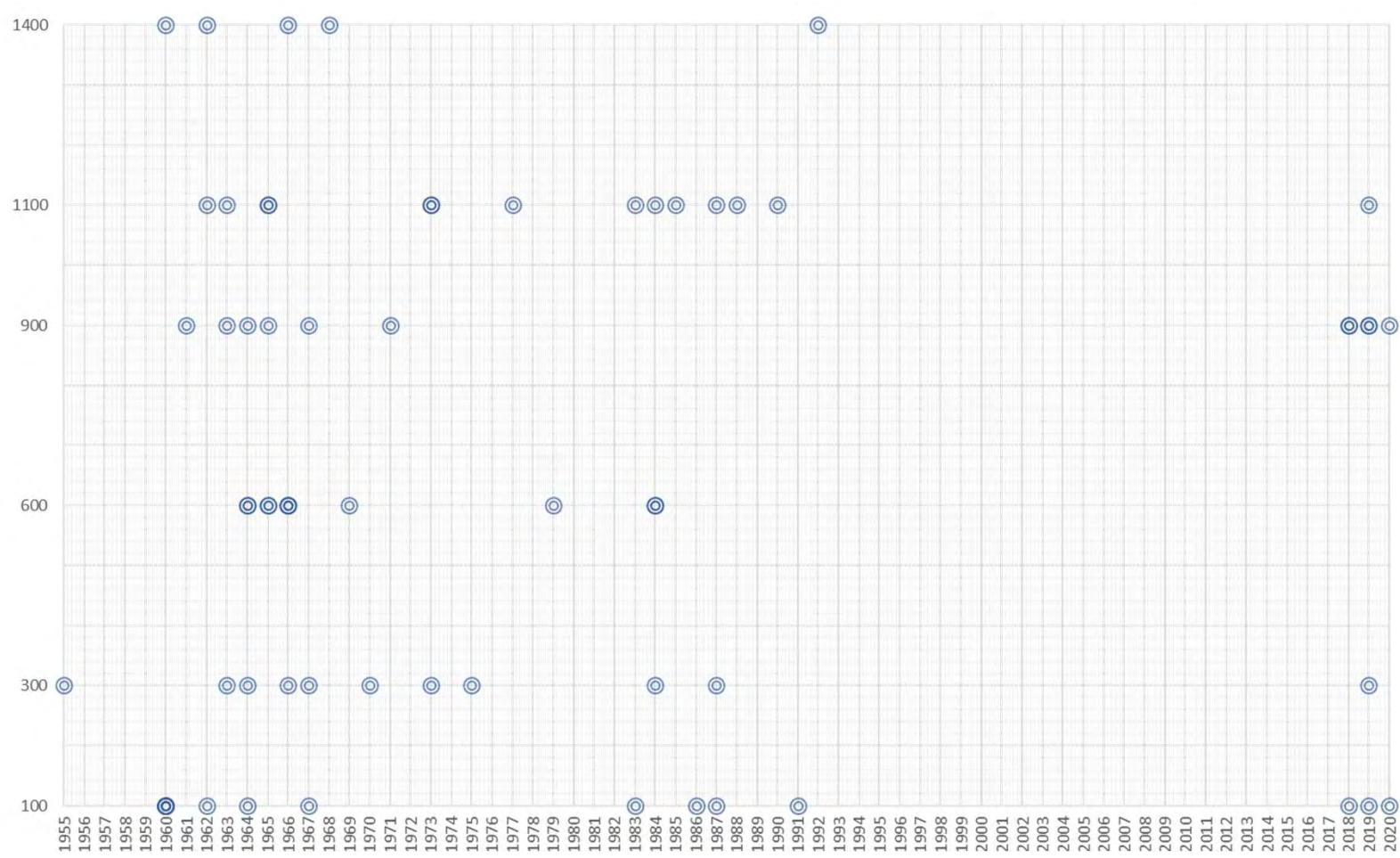


9<sup>th</sup> Place East to 16<sup>th</sup> Place East  
 E. Beach 900-1400 Block  
 Lot depth 150 feet

Setback Factor 1983 to Present = 2  
 Distance in Feet = 60

Beach Nourishment:  
 Wilmington Harbor 2001  
 FEMA Phase I Dune Project 2021

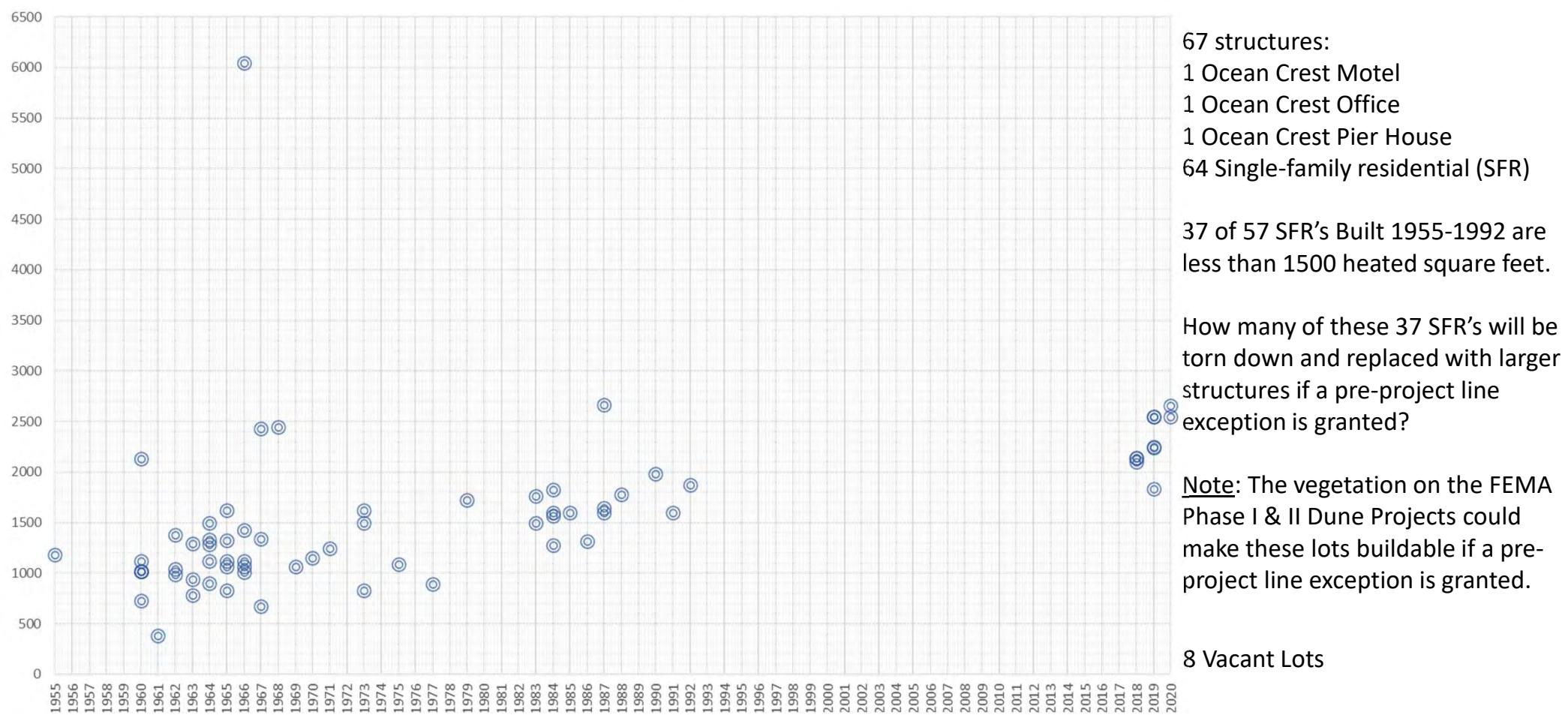
## E. Beach 100-1400 Block Structures Built By Year



Year	Number
1955-1992	57
2018-2020	10
Total	67

Street-side setback:  
 Prior to 2010 - 30 feet  
 2010 – Reduced to 20 feet  
 2014 - Reduced to 15 feet  
 2018 – 15 feet but may be reduced up to ten feet to accommodate dune line

## E. Beach 100-1400 Block Structure Heated Square Feet by Year





Measurement Line (Red) in effect April 2021 from Hurricane Isaias in August 2020  
1429 E. Beach to 2357 W. Beach and from 6601 W. Beach to 6725 W. Beach  
178 of 191 structures could not meet minimum setback from the pre-storm vegetation line in January 2019

Note: The vegetation on the FEMA Phase II Dune Project could re-establish the vegetation line seaward of the Measurement Line





17<sup>th</sup> Place West to 25<sup>th</sup> Place West  
W. Beach 1700-2300 Block  
Lot depth 150 feet

Setback Factor 1983 to Present = 2  
Distance in Feet = 60

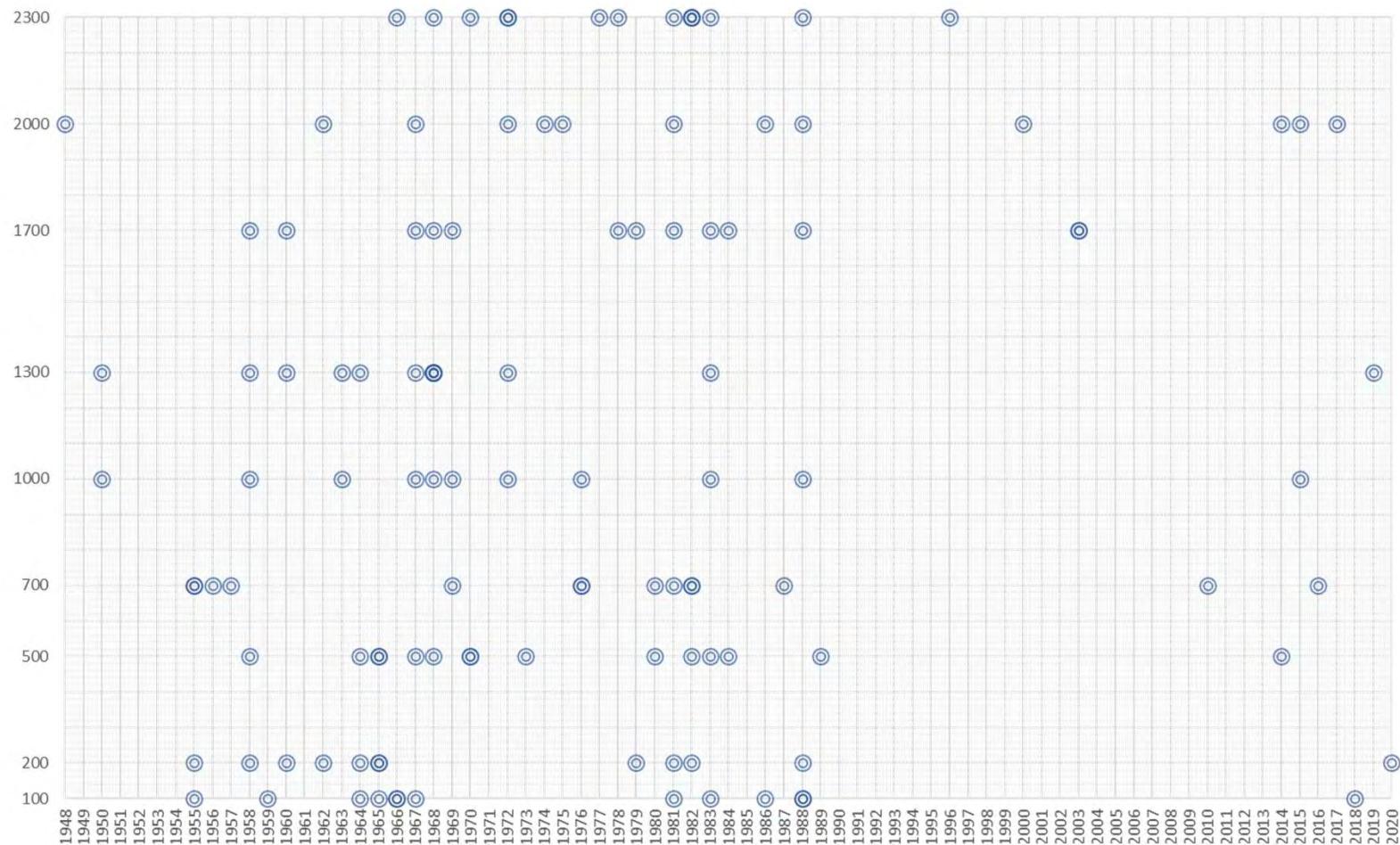
Beach Nourishment:  
Wilmington Harbor 2001  
FEMA Phase II Dune Project 2022

Measurement Line (Red) in effect April 2021 from Hurricane Isaias in August 2020  
1429 E. Beach to 2357 W. Beach and from 6601 W. Beach to 6725 W. Beach  
178 of 191 structures could not meet minimum setback from the pre-storm vegetation line in January 2019

Note: The vegetation on the FEMA Phase II Dune Project could re-establish the vegetation line seaward of the Measurement Line

Measurement Line is typically landward of the pre-project line (green static vegetation line).

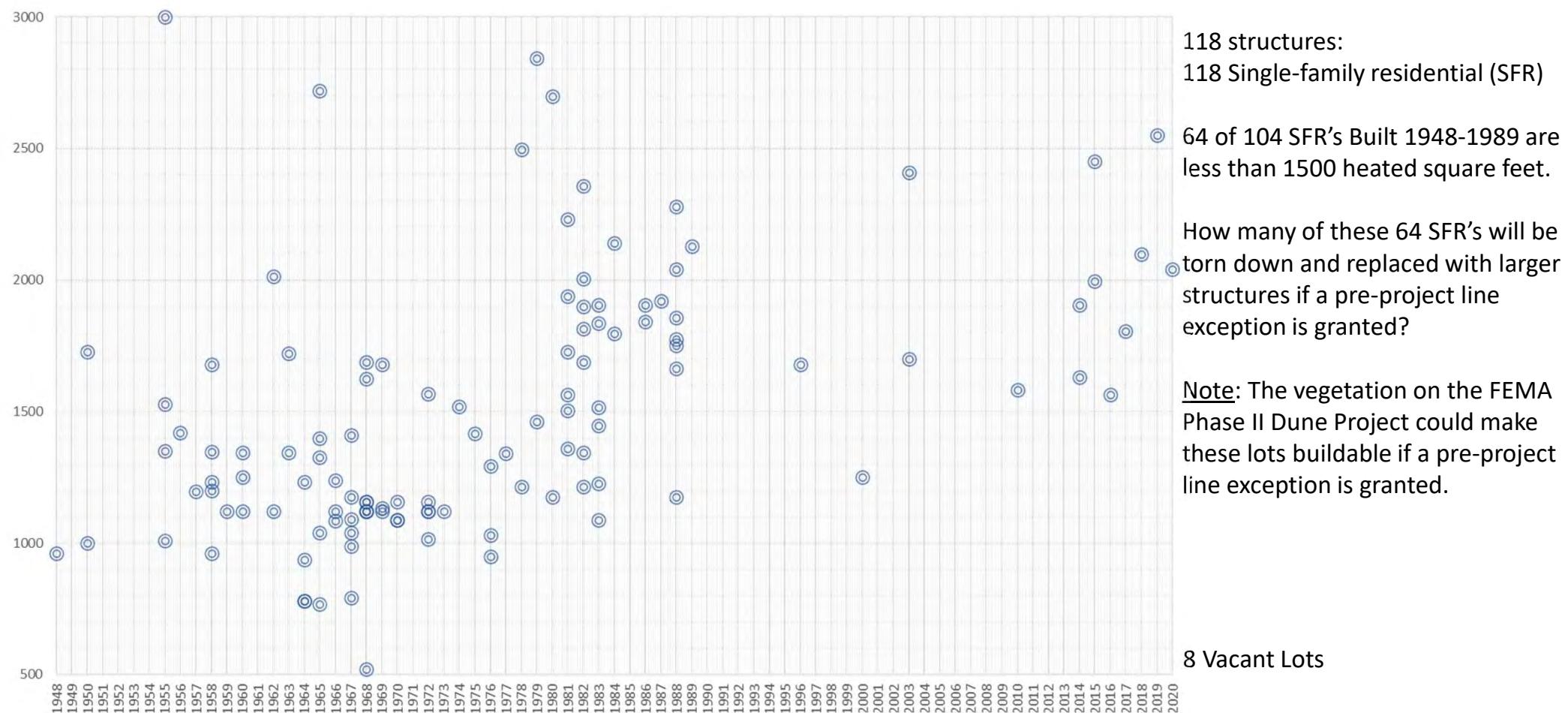
## W. Beach 100-2300 Block Structures Built By Year



Year	Number
1948-1989	104
1996-2016	10
2017-2020	4
<b>Total</b>	<b>118</b>

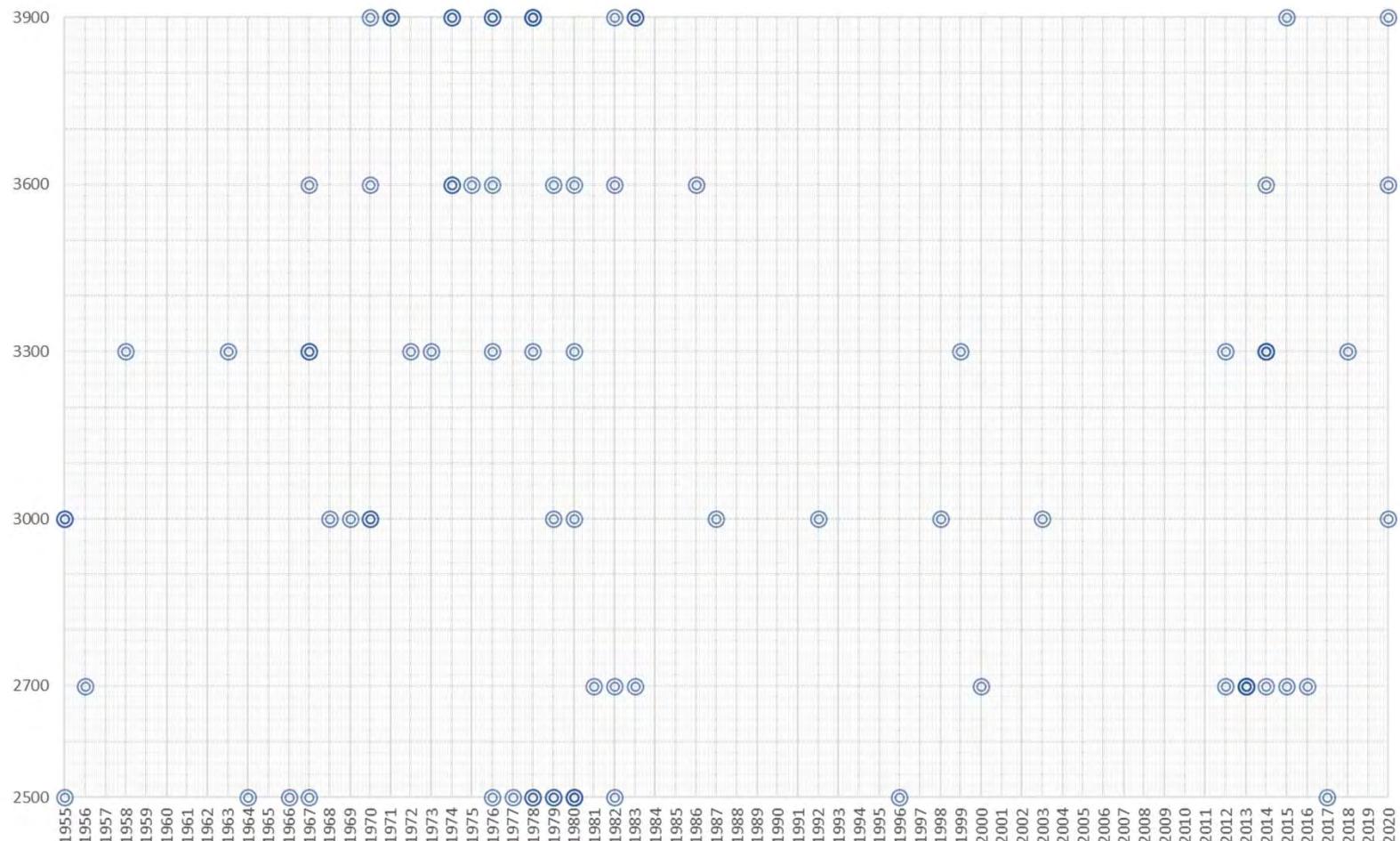
Street-side setback:  
 Prior to 2010 - 30 feet  
 2010 – Reduced to 20 feet  
 2014 - Reduced to 15 feet  
 2018 – 15 feet but may be reduced up to ten feet to accommodate dune line

## W. Beach 100-2300 Block Structure Heated Square Feet by Year





## W. Beach 2500-3900 Block Structures Built By Year

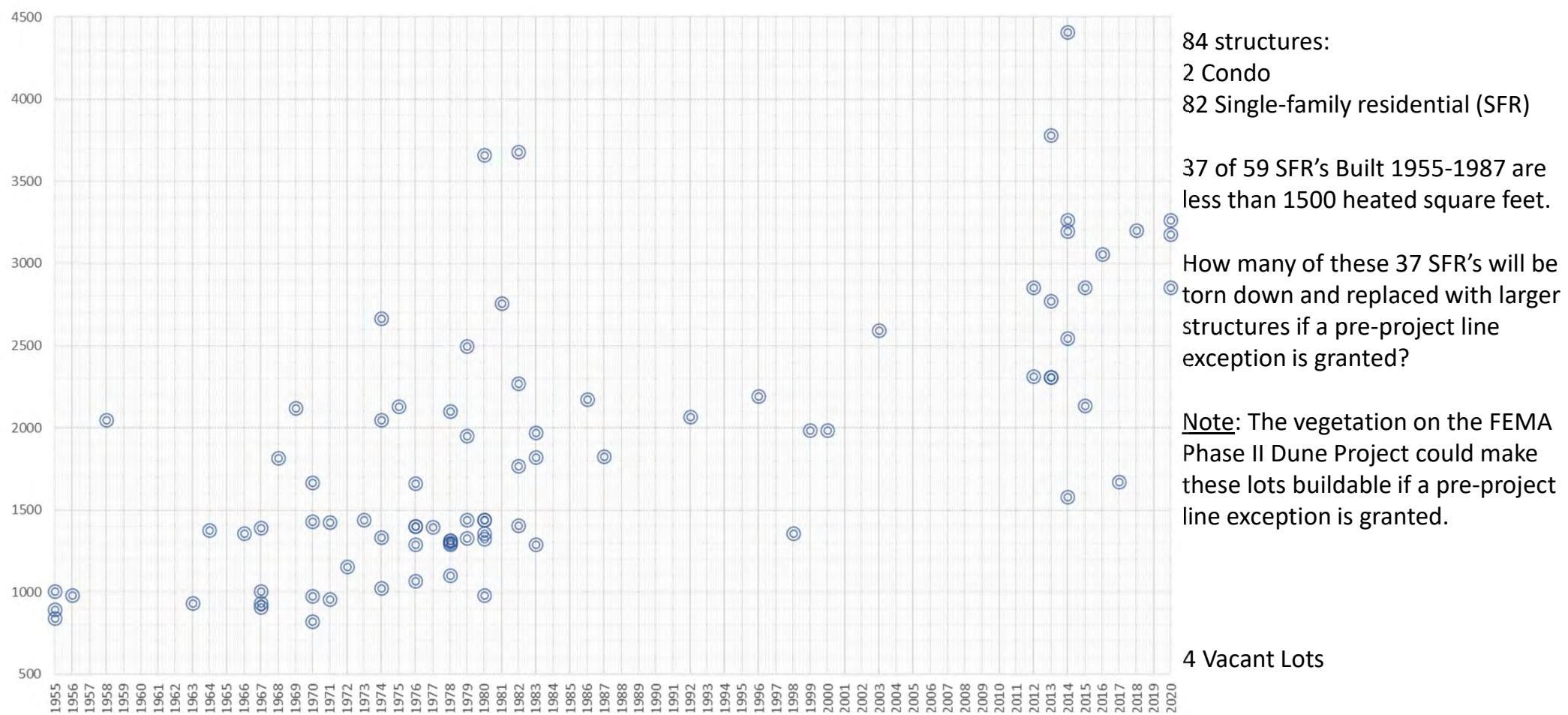


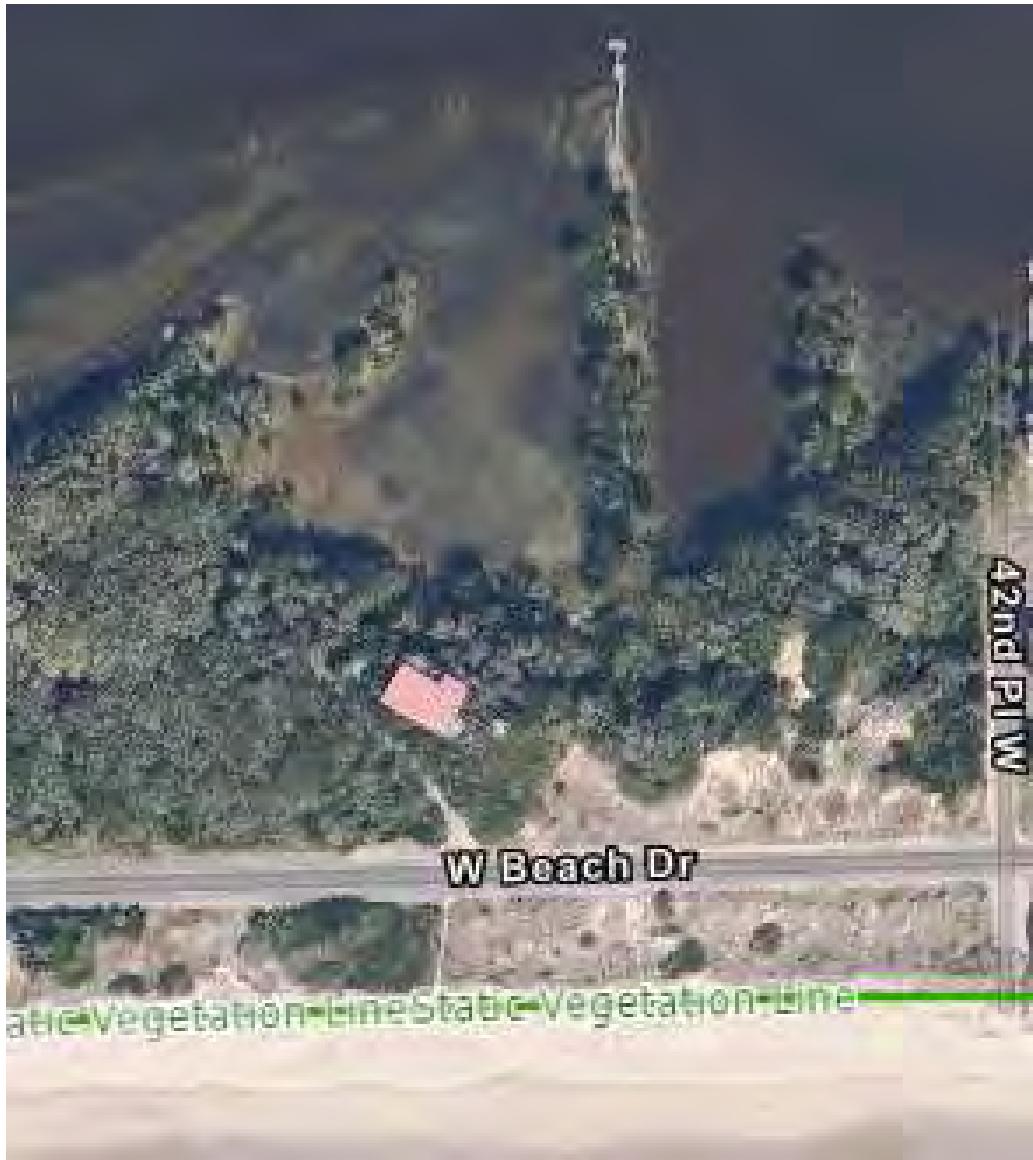
Year	Number
1955-1987	59
1992-2003	6
2012-2016	14
2017-2020	5
Total	84

Street-side setback:  
 Prior to 2010 - 30 feet  
 2010 – Reduced to 20 feet  
 2014 - Reduced to 15 feet  
 2018 – 15 feet but may be reduced up to ten feet to accommodate dune line

2700 Block – Former Long Beach Pier property that was subdivided into lots and buildable with the static vegetation line.

## W. Beach 2500-3900 Block Structure Heated Square Feet by Year





## CAPEL Property

W. Beach 4200 Block

1 parcel subdivided into 4 parcels 4/2019.

3 of these parcels subdivided into 4 lots each 12/2020, 04/2021, 06/2022 (12 lots).

1 parcel can be subdivided into 3 more lots.

Total 15 lots

Lot depth 150 feet

Setback Factor 1983 to Present = 2  
Distance in Feet = 60

### Beach Nourishment:

Wilmington Harbor 2001

FEMA Phase II Dune Project 2022



45<sup>th</sup> Place West to 54<sup>th</sup> Place West  
W. Beach 4500-5100 Block  
Lot depth 150 feet

Setback Factor 1983 to Present = 2  
Distance in Feet = 60

Beach Nourishment:  
Wilmington Harbor 2001  
FEMA Phase II Dune Project 2022

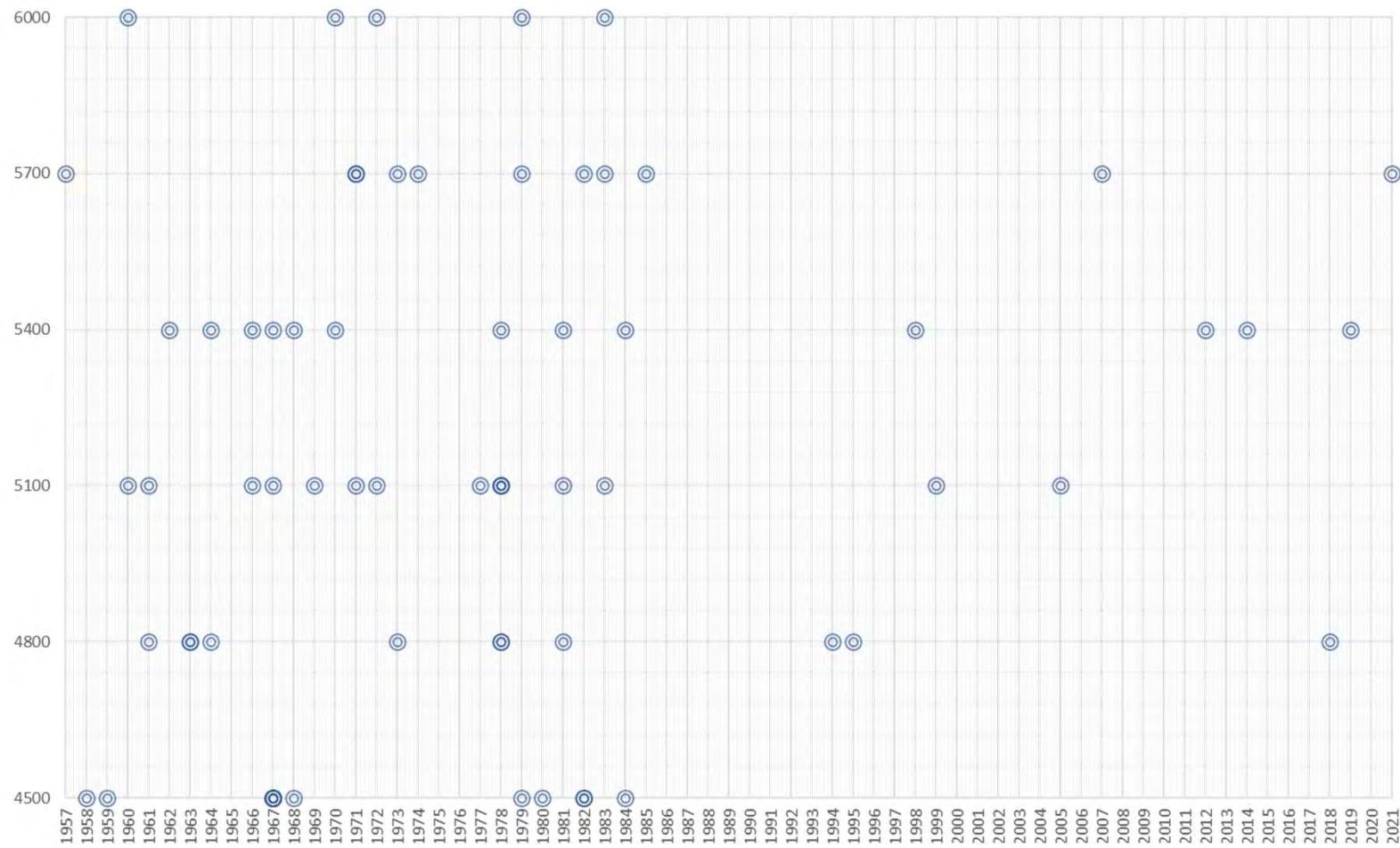


54<sup>th</sup> Place West to Red Roof Inn  
W. Beach 5400-6000 Block  
Lot depth 150 feet

Setback Factor 1983 to Present = 2  
Distance in Feet = 60

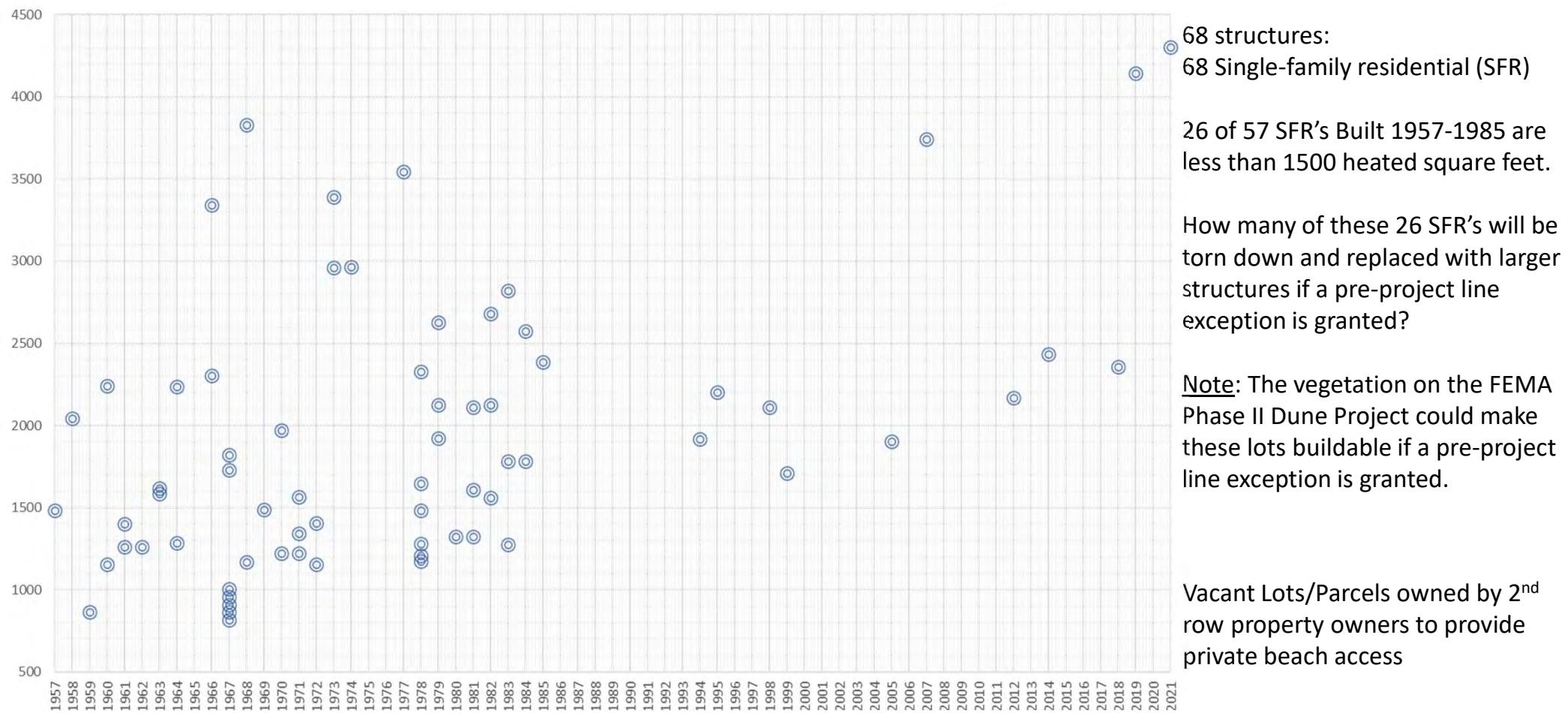
Beach Nourishment:  
Wilmington Harbor 2001  
FEMA Phase II Dune Project 2022

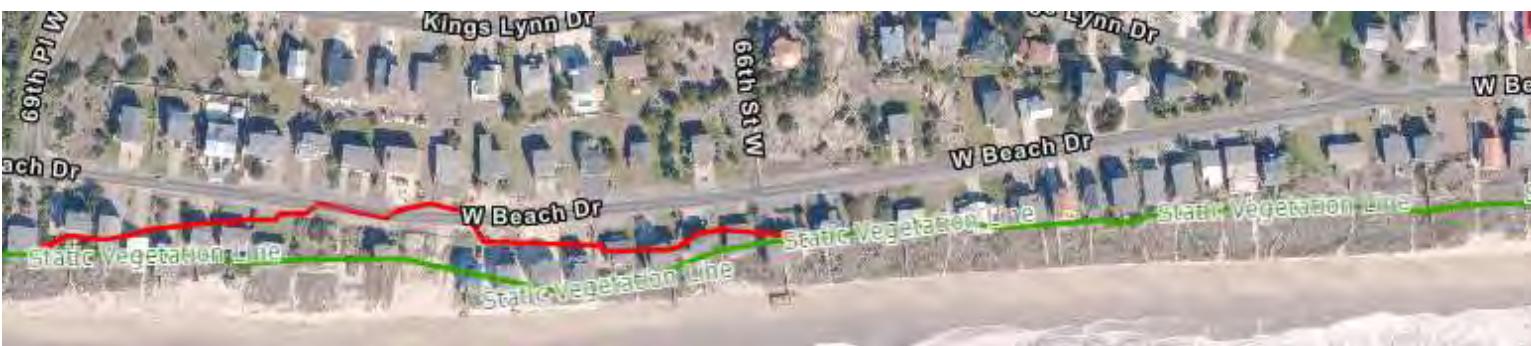
## W. Beach 4500-6000 Block Structures Built By Year



Street-side setback:  
 Prior to 2010 - 30 feet  
 2010 – Reduced to 20 feet  
 2014 - Reduced to 15 feet  
 2018 – 15 feet but may be reduced up to ten feet to accommodate dune line

## W. Beach 4500-6000 Block Structure Heated Square Feet by Year





6025 W. Beach to 69<sup>th</sup> Place West  
W. Beach 6000-6900 Block

6000, 6600, 6700, 6900 Blocks  
Lot depth 150 feet  
6300 Block Lot Depths 150-190

Setback Factor 1983 to Present = 2  
Distance in Feet = 60

Measurement Line (Red) in effect April 2021 from Hurricane Isaias in August 2020  
1429 E. Beach to 2357 W. Beach and from 6601 W. Beach to 6725 W. Beach  
178 of 191 structures could not meet minimum setback from the pre-storm vegetation line in January 2019

Static Vegetation Line dated 1/18/2021 resulting from the 2022 FEMA Phase II Dune Project



69<sup>th</sup> Place West to End W. Beach  
W. Beach 6900-7000 Block  
Lot depth 150 feet

Setback Factor 1983 to Present = 2  
Distance in Feet = 60

Note: The vegetation on the FEMA Phase II Dune Project could re-establish the vegetation line seaward of the Measurement Line and Static Vegetation Line

Beach Nourishment:  
6025 W. Beach to Point Parking Lot  
Taper Wilmington Harbor 2001  
Eastern Channel 2015  
AIWW Crossing 2019  
AIWW Crossing & Widener 2021  
FEMA Phase II Dune Project 2022



W. Beach 6600 Block  
Lot depth 150 feet

Setback Factor 1983 to Present = 2  
Distance in Feet = 60

Sandbag Permits:  
6609 W. Beach 2015  
6613 W. Beach 2014  
6615 W. Beach 2014  
6617 W. Beach 2014  
6621 W. Beach 2014  
6623 W. Beach 2014

Beach Nourishment:  
6600 Block  
Taper Wilmington Harbor 2001  
Eastern Channel 2015  
AIWW Crossing 2019  
AIWW Crossing & Widener 2021  
FEMA Phase II Dune Project 2022

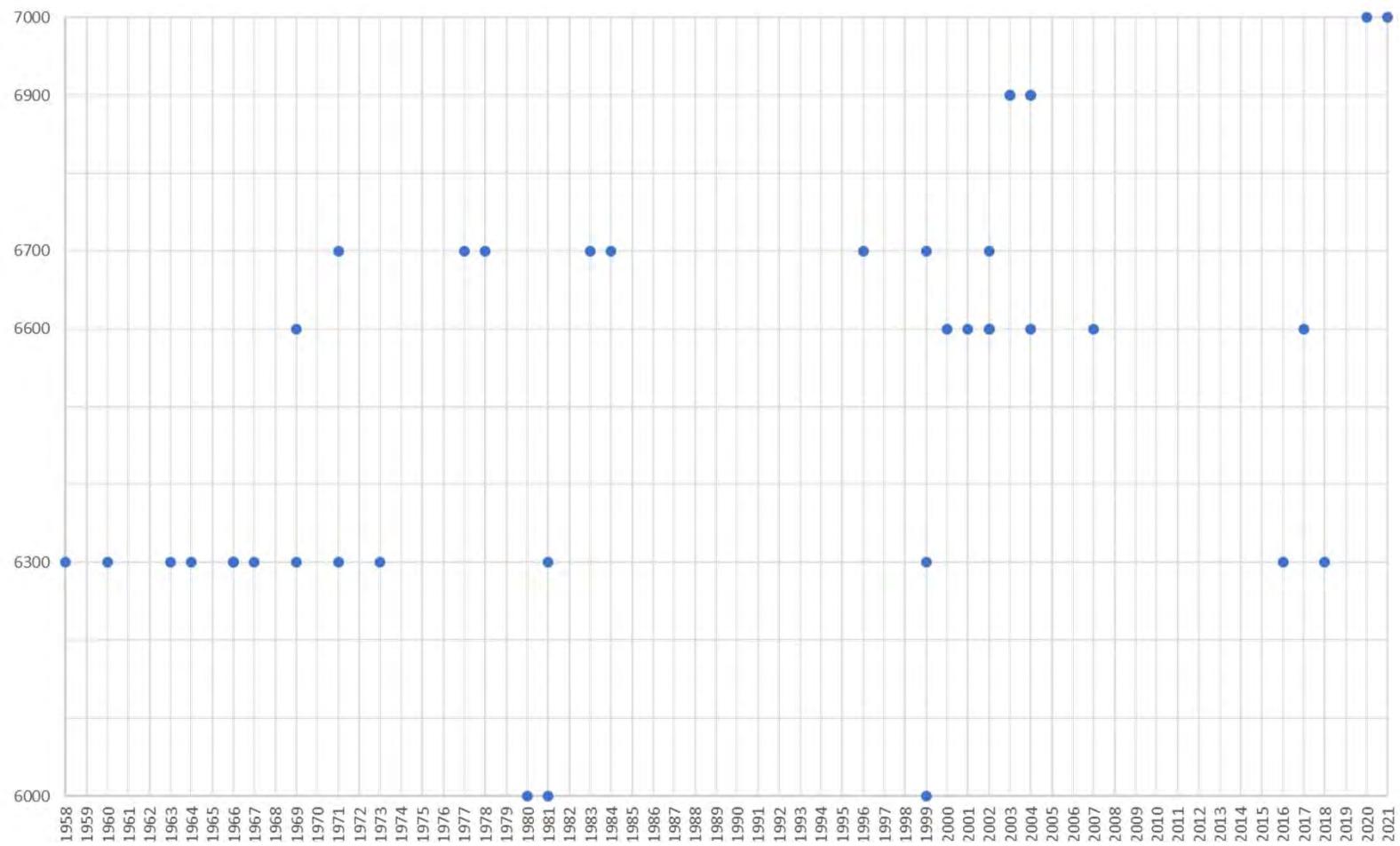
Measurement Line (Red) in effect April 2021 from Hurricane Isaias in August 2020  
1429 E. Beach to 2357 W. Beach and from 6601 W. Beach to 6725 W. Beach  
178 of 191 structures could not meet minimum setback from the pre-storm vegetation line in January 2019

Note: The vegetation on the FEMA Phase II Dune Project could re-establish the vegetation line seaward of the Measurement Line and Static Vegetation Line

Static Vegetation Line dated 1/18/2021 resulting from the 2022 FEMA Phase II Dune Project

At least one house in this area was relocated under Upton-Jones about 30 years ago. About 15 years later, a new house was built on the same lot and now has sandbags.

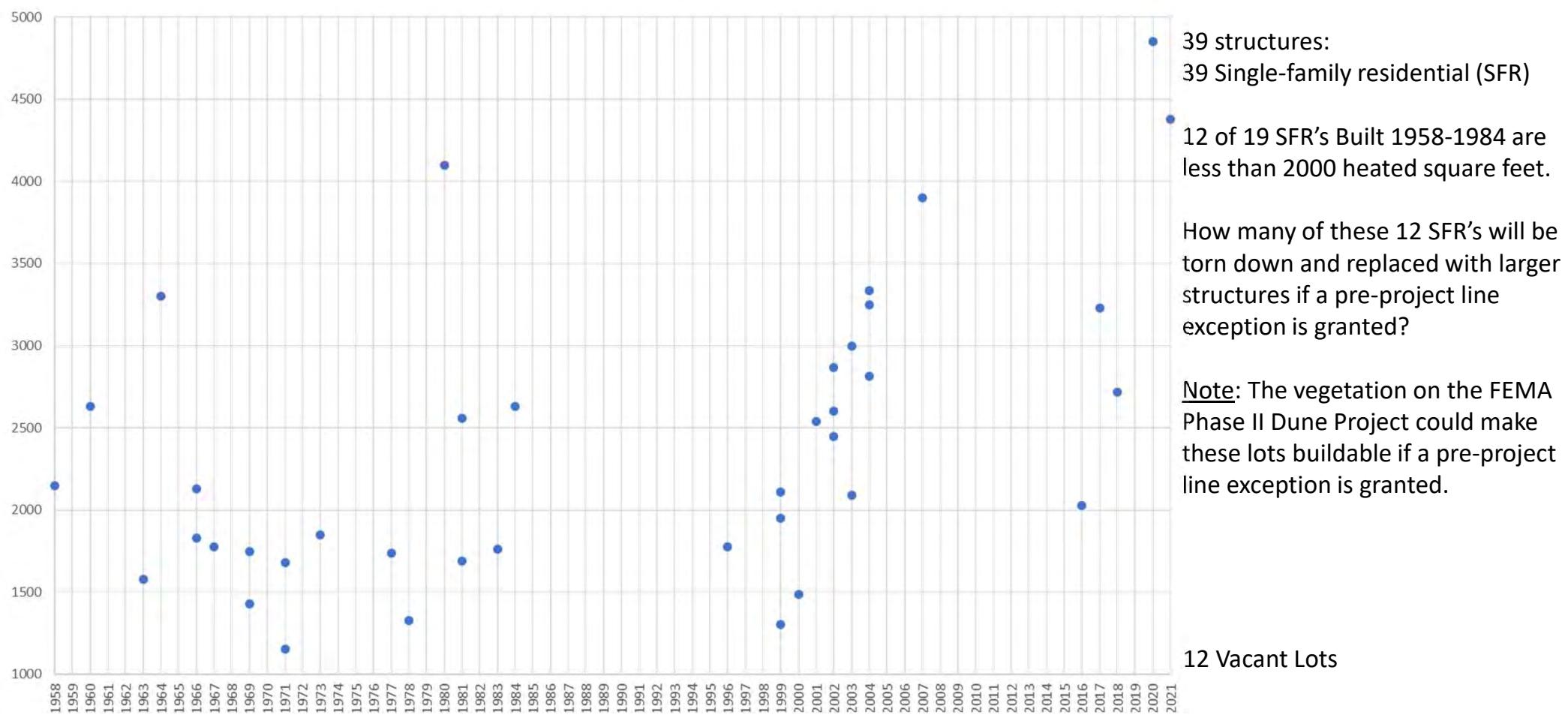
## 6025 W. Beach - 7000 Block Structures Built By Year



Year	Number
1958-1984	19
1996-2016	16
2017-2021	4
Total	39

Street-side setback:  
 Prior to 2010 - 30 feet  
 2010 – Reduced to 20 feet  
 2014 - Reduced to 15 feet  
 2018 – 15 feet but may be reduced up to ten feet to accommodate dune line

## 6025 W. Beach - 7000 Block Structure Heated Square Feet by Year



## Oceanfront Sections:

1. Ocean Drive 100-1100 Block Slides 9-11
2. E. Beach 6800-7000 & 7400-7800 Block (SE 71<sup>st</sup> – SE 74<sup>th</sup>) Slides 12-14  
(SE 58<sup>th</sup> – SE 67<sup>th</sup>) Slide 16
3. E. Beach 4000-5500 Block Slides 17-20
4. E. Beach 2500-3700 Block Slides 21-23
5. E. Beach 1600-2200 Block Slides 24-26
6. E. Beach 100-1400 Block Slides 27-29
7. W. Beach 100-2300 Block Slides 30-33
8. W. Beach 2500-3900 Block Slides 34-36
9. W. Beach 4200 Block Slide 37
10. W. Beach 4500-6000 Block Slides 38-40
11. W. Beach 6000-7000 Block Slides 41-44

Section 1	
Year	Number
1955-1982	17
1983-1994	13
2015	2
2017-2021	7
Total	39

17 of 27 SFR's Built 1956-1994 are less than 1500 heated square feet.  
3 vacant lots

Section 5	
Year	Number
1954-1970	9
1977-1994	13
1995-2006	20
2021	1
Total	43

13 of 22 SFR's Built 1954-1994 are less than 1500 heated square feet.  
4 vacant lots

Section 9	
Year	Number
1940-2021	0
2022	?
Total	0

12 Lots  
1 parcel (3 lots)

Section 2	
Year	Number
1965-1994	16
1999-2016	13
2017-2020	3
Total	32

11 of 14 SFR's Built 1971-1994 are less than 2000 heated square feet.  
3 vacant lots

Section 6	
Year	Number
1955-1992	57
2018-2020	10
Total	67

37 of 57 SFR's Built 1955-1992 are less than 1500 heated square feet.  
8 vacant lots

Section 10	
Year	Number
1957-1994	58
1995-2014	7
2018-2021	3
Total	68

26 of 58 SFR's Built 1957-1994 are less than 1500 heated square feet.  
Vacant lots are 2<sup>nd</sup> row beach access

Section 3	
Year	Number
1955-1985	32
2017-2020	18
Total	50

26 of 32 SFR's Built 1955-1985 are less than 1500 heated square feet.  
29 vacant lots

Section 7	
Year	Number
1948-1989	104
1996-2016	10
2017-2020	4
Total	118

64 of 104 SFR's Built 1948-1989 are less than 1500 heated square feet.  
8 vacant lots

Section 11	
Year	Number
1958-1984	19
1996-2016	16
2017-2021	4
Total	39

12 of 19 SFR's Built 1958-1984 are less than 2000 heated square feet.  
12 vacant lots

Section 4	
Year	Number
1940-1990	46
2018-2021	18
Total	64

33 of 46 SFR's Built 1940-1990 are less than 1500 heated square feet.  
13 vacant lots

Section 8	
Year	Number
1955-1994	60
1996-2003	5
2012-2016	14
2017-2020	5
Total	84

37 of 60 SFR's Built 1955-1994 are less than 1500 heated square feet.  
4 vacant lots

## Summary Structures Built by Year

Sections 1, 3-8, 10	
Year	Number
1940-1994	409
1995-2016	58
2017-2021	66
Total	533
SFR	524

253 of 406 SFR's Built  
1940-1994 are less  
than 1500 heated  
square feet.  
69 vacant lots

How many of these 253 SFR's will be torn down and replaced  
with larger structures if a pre-project line exception is granted?

How many of these 69 lots will remain vacant if a pre-project  
line exception is granted?

Sections 2, 11	
Year	Number
1940-1994	35
1995-2016	29
2017-2021	7
Total	71
SFR	69

23 of 33 SFR's Built  
1958-1994 are less  
than 2000 heated  
square feet.  
15 vacant lots

How many of these 23 SFR's will be torn down and replaced  
with larger structures if a pre-project line exception is granted?

How many of these 15 lots will remain vacant if a pre-project  
line exception is granted?

## Hurricanes/Tropical Storms

Year	Name
1984	Diana
1989	Hugo
1996	Bertha
1996	Fran
1996	Josephine
1998	Bonnie
1999	Dennis
1999	Floyd
2016	Matthew
2018	Florence
2020	Isaias

## Beach Nourishment Funding Sources

### West End Projects & Other Single Projects

Year	Project Name	Cubic Yards
2015	Eastern Channel (LFHR)	227,315
2017/18	FEMA Emergency Dune	143,646
2018	Wilmington Harbor	640,300
2019	AIWW Crossing	121,300
2021	AIWW Crossing & Widener	161,200
		<b>1,293,761</b>

2015 thru 2021			
Federal (FEMA/USACE)	\$ 4,814,650	30%	
State (DWR)	\$ 3,922,982	24%	
Town	\$ 7,467,950	46%	
County	\$ 500,000	3%	
	<b>\$ 16,205,582</b>	100%	

## Beach Nourishment Funding Sources “Initial Project Master Plan”

FEMA Phase I Dune Project		
Federal (FEMA/USACE)	\$ 7,125,000	46%
State (DWR)	\$ 5,532,377	35%
Town	\$ 3,000,000	19%
County		0%
	<b>\$ 15,657,377</b>	100%

Year	Project Name	Cubic Yards
2021	FEMA Phase I Dune Design LOP 25-Yr	816,000
2022	FEMA Phase II Dune Design LOP 25-Yr	765,000
2024/25	Advance Fill & Design Volume Lost	<b>**1,650,000</b>
		<b>3,231,000</b>

FEMA Phase II Dune Project		
Federal (FEMA/USACE)	\$ 7,545,970	43%
State (DWR)	\$ 3,859,560	22%
Town	\$ 6,094,470	35%
County		0%
	<b>\$ 17,500,000</b>	100%

Grand Total		
Federal (FEMA/USACE)	\$ 14,670,970	20%
State (DWR)	\$ 29,391,937	40%
Town	\$ 29,094,470	40%
County	\$ -	0%
	<b>\$ 73,157,377</b>	100%

FY 2024-2025 Project		
Federal (FEMA/USACE)		0%
State (DWR)	\$ 20,000,000	50%
Town	\$ 20,000,000	50%
County		0%
	<b>\$ 40,000,000</b>	100%

### Maintenance Event Volume & Cost Estimate

6-year interval

**\*\*1,300,000 cubic yards** from Frying Pan Shoals

\$31,900,000 (Current Year Dollars)

Funding Sources?

**\*\* Permitting for sand in progress**

## Excerpts 2017 Town of Oak Island Comprehensive Land Use Plan

### Vision Statement

Oak Island will be a community which preserves, protects, and enhances its natural and cultural environment including shoreline access, waterway, beaches, dunes, water access, residential areas, and recreational opportunities for all ages and abilities. The Town's unique scale and character will continue to provide a desirable place in which to live, work, and vacation. Multi-modal transportation options including efficient sidewalks, bikeways, and roadway systems will provide for an accessible community. Economic development will be coordinated with preservation of the Town's residential areas.

I.54 Due to the unique risks to life and property that exist within the area designated as the Ocean Hazard System AEC, the Town strongly supports the State policies that regulate the location and intensity of development in these areas. The Town will enforce local policies that bolster the State's programs.  
Schedule: Continuing.

I.103 The Town will support responsible managed residential growth, including both the mainland and island areas. Schedule: Continuing.

I.116 The Town strongly encourages overall land use and development patterns that support retention of the Oak Island small town character, its existing quality of development, and its family atmosphere, including limited mixed use. Schedule: Continuing, High.

## Excerpts CRC-21-34 and CRC-22-12

- Retain State oversight in areas where beach nourishment projects are completed;
- Reflect increased regulatory flexibility for construction setbacks where beach communities demonstrate a local commitment to maintaining beach nourishment projects;
- Prevent beach nourishment projects from becoming a stimulus for new development in unsuitable areas;

When the Commission began considering implementation of graduated oceanfront setbacks in 2009, there was recognition that beach nourishment was becoming a common, and if maintained, successful approach to managing beach erosion in many locations. However, the Commission was still concerned that beach nourishment created an artificial situation that could lead to seaward encroachment of structures that could put lives and property at risk, and lead to the encroachment of structures onto the public trust beach, particularly when there was not a long-term commitment to maintenance of nourishment projects.

The proposed Beach Management Plan rules also do not prohibit local governments from implementing more restrictive lines of construction on the oceanfront, which are in effect in several oceanfront communities and can be more restrictive than the minimum standards adopted by the Commission.

A question was also raised regarding the Commission's ability to approve an exception for a particular segment of any beach or inlet within a beach community. DCM has discussed this with Commission Counsel and believes that this is an available option under the proposed rule language.

## About Dara Royal

Oak Island has been part of my life since my parents bought a lot in Long Beach in 1958 when I was two years old. I now live in a house later built that lot, and I've been a full-time resident since moving here in July 1992. My experience includes:

### NC Division of Coastal Management:

NC Coastal Resources Advisory Council (NC CRAC)

Coastal Cities Representative/Planning & Special Issues

NC CRAC Vice-Chair

NC CRAC Chair

08/2003 – 06/2012

01/2006 – 12/2007

01/2008 – 12/2010

### Town of Long Beach/Town of Oak Island:

LB/OI Damage Assessment Team Member

05/1997 – Present

LB/OI Beach Preservation Advisory Board Chair

09/1997 – 09/2000

LB/OI Erosion Control Committee Member

05/1997 – 09/2000

Oak Island Town Council Member

11/2003 – 12/2013

starfish216blog Oak Island Issues: An Alternative View

11/2019 - Present

January 2, 2023

**Town Council – Oak Island  
For – January 10<sup>th</sup>, 2023 - Town Council Meeting**

**Response to CRC – Development line removal and request for Approval  
of a Town of Oak Island Beach Management plan**

Dear Town Council of Oak Island,

My wife and I were VERY discouraged to hear that the North Carolina Rules Review Commission approved the Coastal Resources Commission (CRC), repeal of the Development Line and subsequent rule changes to beach front development. The resulting removal of the Development Line and reverting back to the 1998 static line creates extreme hardship for our property, personal financial position and our ability to perform routine maintenance and/or make improvements to the property.

Our property at 911 Ocean Drive has a 9-foot natural dune in front of the house that is 70+ feet forward of the house. This natural protection has resulted in us surviving the last 5 hurricanes with no damage due to the height and vegetation coverage of this PERMANENT structure.

Reverting back to the 1998 static line (only 26 feet from our house, 18 feet from the deck edge) changes our lot from a buildable lot to an “unbuildable lot”. If our house endures damage to the point of rebuilding, the footprint of the house would change from the present 30' x 30' to an unacceptable 30' x 8' buildable area. This would result in us having only enough land to place a trailer back onto the property. I do NOT think it is in the best interest of the Town of Oak Island to create an ocean front STILTED trailer park.

We implore you to work diligently to establish an approved Beach Management Plan that would individually address Oak Island Beach front properties by measuring from the vegetation line at the time of development (i.e. vegetation line **70+ feet** in front of our home instead of the 1998 static line that is only **26 feet** from our house).

If a new Beach Management Plan is **NOT** put in place **ALL** of the following situations will happen;

- Lose in Assessment Value will occur reducing the Town of Oak Island tax base.
- Land Value will decrease due to unbuildable lots affecting the entire real estate market.
- Some properties will have the rebuildable size of their homes reduced to unacceptable conditions.
- Future homeowners will be unable to obtain mortgages due to “Unbuildable” designation (past history of unbuildable lot resulted in 19 rejections from mortgage companies in 2015, FHA and CFHA loans are not granted on unbuildable lots).
- Home owners will lose the ability to make home improvements that could increase home and overall property values for the town.
- Rental income and the rental income market will be adversely affected.

Thank you in advance for your time and consideration and our hope is that you will fully understand how the repeal of the Development Plan by the CRC fully impacts the Town of Oak Island and their residents.

We also hope you understand, that establishing a Town of Oak Island Beach Management Plan that includes a Development Line to the 1<sup>st</sup> line of vegetation (at the time of development) is in the best interests of the town, its residents, and its taxpayers.

We are out of town during the January 10<sup>th</sup> town meeting and therefore are submitting this letter for town record. We look forward to the review and approval of a Comprehensive Beach Management Plan that will benefit **ALL** town of Oak Island residents.



*Richard and Karen Frisk  
911 Ocean Drive  
Oak Island, NC*

# Appendix D4:

## Public Hearing Notice



## Town of Oak Island **PUBLIC NOTICE**

The Oak Island Town Council will hold a Public Hearing beginning at 6:00 p.m., or as soon thereafter as possible, on Tuesday, October 4, 2022, in Council Chambers at the Oak Island Town Hall, 4601 E. Oak Island Drive. The purpose of the Public Hearing is to receive citizens' comments on a Beach Management Plan to be submitted to the NC Coastal Resources Commission.

Lisa P. Stites, MMC  
Town Clerk

(9-21)