

Date: September 6, 2024
RE: Joint Permitting Hearing:
US WIND PROJECT

Dear DNREC Leadership:

I am responding to the Permitting of the US WIND PROJECT, specifically to the Indian River and Indian River Bay, Surface Water and Sediment Assessment, Page 31 and 35 (as shown below). Since I know the Indian River Bay Area as a boater, fisherman and **retired professional surveyor** that specialized in hydrographic surveys, it appears to me that there are several flaws in these maps as shown on Page 31 and 35. Importantly, there are several significant channels that are missing that will change the outcome of the disbursement.

It appears Beach Cove and its tributaries might not have been completely analyzed, specifically:

1. The Main Channel for Beach Cove from just south of the South Shore Marina as depicted on the MAP OF INDIAN RIVER BAY from INDIAN RIVER INLET TO BEACH COVE (from the Active Captain App) as edited and the aerial photo of Indian River Bay to Beach Cove (Courtesy of Google Maps) as edited (both shown below) and marked By DNREC Channel Markers 31-48. Marker 31 is just below the South Shore Marina and marker 48 is at the confluence of the channel at the north side of Beach Cove by the housing development on the North and East Side of Beach Cove. This channel varies in depth from 6 to 12 feet and supplies and drains the majority of Beach Cove and its tributaries. One tributary extends southward two plus miles to the Salt Pond. The Map 31 and 35 depicts the main channel on the west side of the marsh just east of the VFW. This channel is ankle deep at low tide and maybe just over the knee at high tide, so there's very little water that will transmit sediments. The Main Current will transport more sediment than is being shown on these maps because of the high volume of water coming in through this channel. I know for a fact that over the past ten years Beach Cove and its tributaries have accumulated over a foot of sediment. Additional sediment within Beach Cove and its tributaries will further impede wildlife and boating.
2. Maps 31 and 35 don't show much if any sediment going into Whites Creek. As you are aware, Whites Creek was just dredged 2 years ago and is connected to the Intercoastal Waterway between Indian River Bay and the Little Assawoman Bay, which was just dredged this past year. Whites Creek also has the Intercoastal Waterway Channel that flows across Indian River Bay on the west side up to Massey's Ditch and the unnamed optional Intercoastal Waterway on

the west side of Burton's Island that is located on the west side of the Indian River Marina. With the amount of water that Whites Creek draws including the Intercoastal Waterway in my opinion a substantial amount of sediment will be sucked into not only Whites Creek but also the Intercoastal Waterway.

3. On the north side of Indian River Inlet and Indian River Bay and the previously mentioned intercoastal waterways, Massy's Ditch and the Waterway west of Burtons Island, the watershed area stretches for 5 miles. To have water over that length that drains and fills up 1-4 feet twice a day requires a lot of water. My best guess would be about, if not more, than 50% of the water that comes through the inlet ends up in Rehoboth Bay and the Intercoastal Water Way that connects Rehoboth Bay to Lewes and the Delaware Bay. The Maps 31 and 35 show no sediment deposits north of Indian River Bay. Let's look at a bigger picture, since the Indian River current is so strong that back in 2007 or so DelDOT determined the lifespan of the old bridge wouldn't last beyond 2010-2012 because the bridge abutments were in the middle of Indian River Inlet and the current was undermining the abutments to the point that they were about to collapse. The depth was at least 90 feet or more and there were large rocks placed to try to protect the abutments. However, that didn't work out. So, since this water pushes sediment out several 100 yards past the breakwaters, when the tide changes and the water flows in, so does the sediment. Since more than 50% of that water travels in and out of Rehoboth Bay, any loose sediment from a few hundred yards offshore to Massey's Ditch gets sucked up into Rehoboth Bay.
4. When you look at the other exhibits in the permitting document, the sediment expansion for where the lines will be buried shows only to be out 20 or so feet on each side of the buried lines. To me, that only works if the water is a still body of water. When the water flows in and out twice a day, that sediment is pushed all around to the least point of resistance. So, the amount of sediment is compounded by how strong the current is. For example: in a 2-foot-deep area the amount of current disturbance will be minimal. At 4 feet the amount of current flow is doubled and at 20 feet the amount of current flow is quadrupled. In Map 31 the assessment shows no sediment flowing out of the inlet. I don't know how that is possible since the inlet is up to 70-90 feet deep moving millions of gallons of water per minute. To put this into perspective take a bucket of sand and throw it on your driveway, then take your garden hose in the shower mode and try to move the sand - that's like the tides trying to move it in 2-4 feet of water, then increase the pressure to full, you can move some of the sand faster down the driveway, but not all. Now put 2 boards in the driveway about a foot apart and put all the sand between the boards and blast it with the hose, most of that sand will end up at the end of the boards or further. This is just what happens in the inlet. Any channel will funnel more sediment faster and farther than lower slower moving water. So, in my professional opinion the assessment

shown does not reflect true effects of what is happening within Indian River Inlet or Indian River Bay and its tributaries.

5. On the note of water turbulence and the buried lines, which I've been told will only be 6 feet deep, a similar problem to the old bridge abutments previously referenced surfaces. Any loose sand and sediment that has been disturbed and replaced will subject the bridge abutments to erosion. These lines could easily be exposed in a short period of time. What will protect these lines from any damage once exposed? And at only 6 feet deep, they will surely be exposed. According to OSHA Standards (see OSHA listing below) the safe distance to a 350-1000 kV line is 50 feet and an electrical engineer must determine the safe distance for any line greater than 1000 kV. The lines proposed buried 6 feet plus an average water depth of Indian River Bay and River at about 6 feet, total 12 feet, is significantly less than the OSHA standard of 50 feet. This needs to be addressed prior to approving any permits.
6. Since damage was mentioned in the last paragraph, what if any first responders have been contacted or a safety program being provided should damage or a disaster arise from mixing electric power and salt water? The Coast Guard Boats are all metal, the Fire Department skiffs are metal. Metal, electricity and water don't mix. Who is going to respond to this type of disaster? This needs to be addressed prior to approving any permits.
7. To my knowledge no environmental study on underwater life, horseshoe crabs, blue crabs, clams, oysters, etc. has been conducted. If the safe distance to a 350-1000kV line is 50 feet, how is the Electromagnetic Field (EMF) going to impact these creatures, especially considering that we're talking about mega-megawatts? Since some of these creatures are used for food and medicine, how does the EMF affect them and people? How will the EMF affect residents living near this EMF? This study needs to be addressed before the permits are approved.
8. I also have concern regarding drilling noise and the times drilling will be allowed. Virginia Beach Residents that live within a mile or so of similar on-land drilling complained about the noise and vibrations that are going on 24/7. See article listed below "Virginia Beach Noise Issues from Wind Farm Drilling". DNREC also has the word "night" defined as 10 pm-7 am as well as definitions for noise and disturbances (see below). I live about 2 miles from the inlet and about 3/4 mile from 3Rs. The noise this summer for the work the Corp of Engineers was doing on the inlet was loud. Luckily, they worked regular business hours. What is DNREC going to allow for US Wind? I didn't see any of that in the permit requests.

Based on all the permit information that is available at (<https://dnrec.delaware.gov/us-wind/>) and all the unanswered questions that I and others have, I strongly advise that there is significant additional study that needs to be completed before permitting is approved – all of which pose not only life-safety risk for our community, but significant long term negative impact to the state of Delaware.

Jonathan Russell
411 East Bank Road
Bethany Beach, DE 19930

cc:
Senator Hocker
Representative Gray

INDIAN RIVER AND INDIAN RIVER BAY SURFACE WATER AND SEDIMENT ASSESSMENT MAP 31

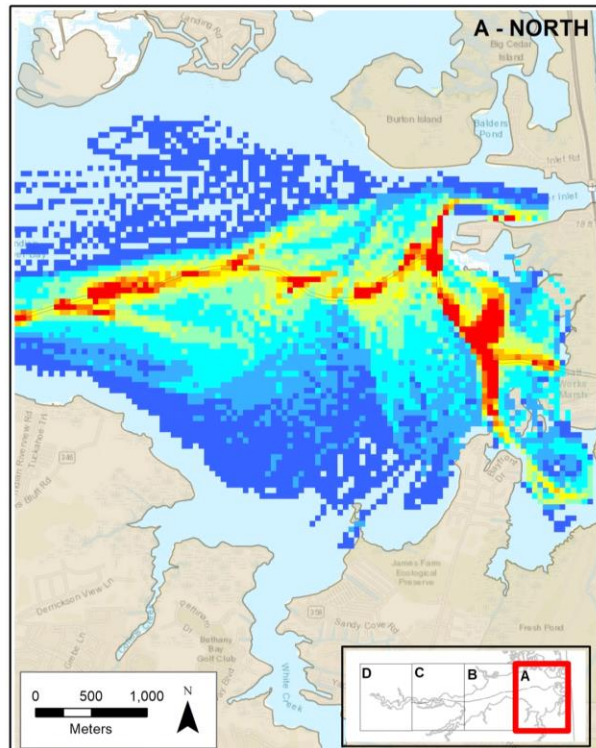
6:22 PM Thu Sep 5

86%

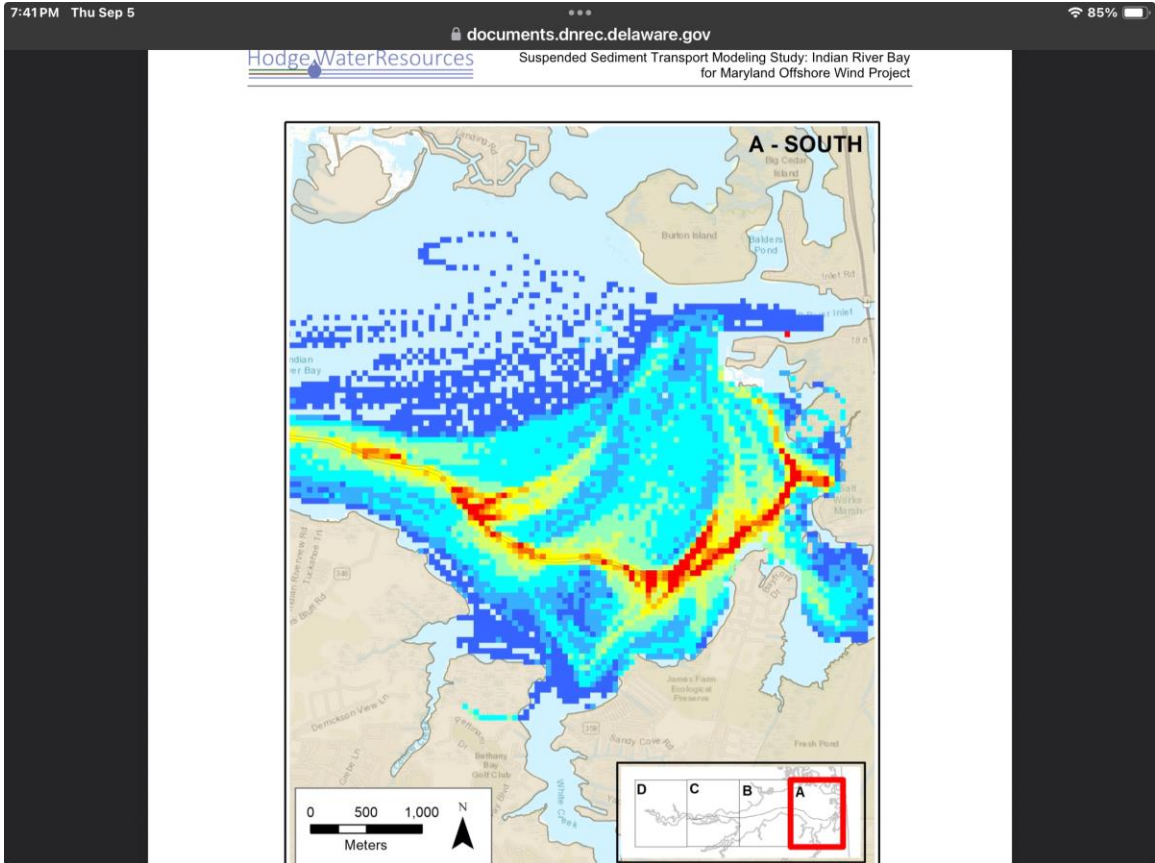
documents.dnrec.delaware.gov

HodgeWaterResources

Suspended Sediment Transport Modeling Study: Indian River Bay
for Maryland Offshore Wind Project

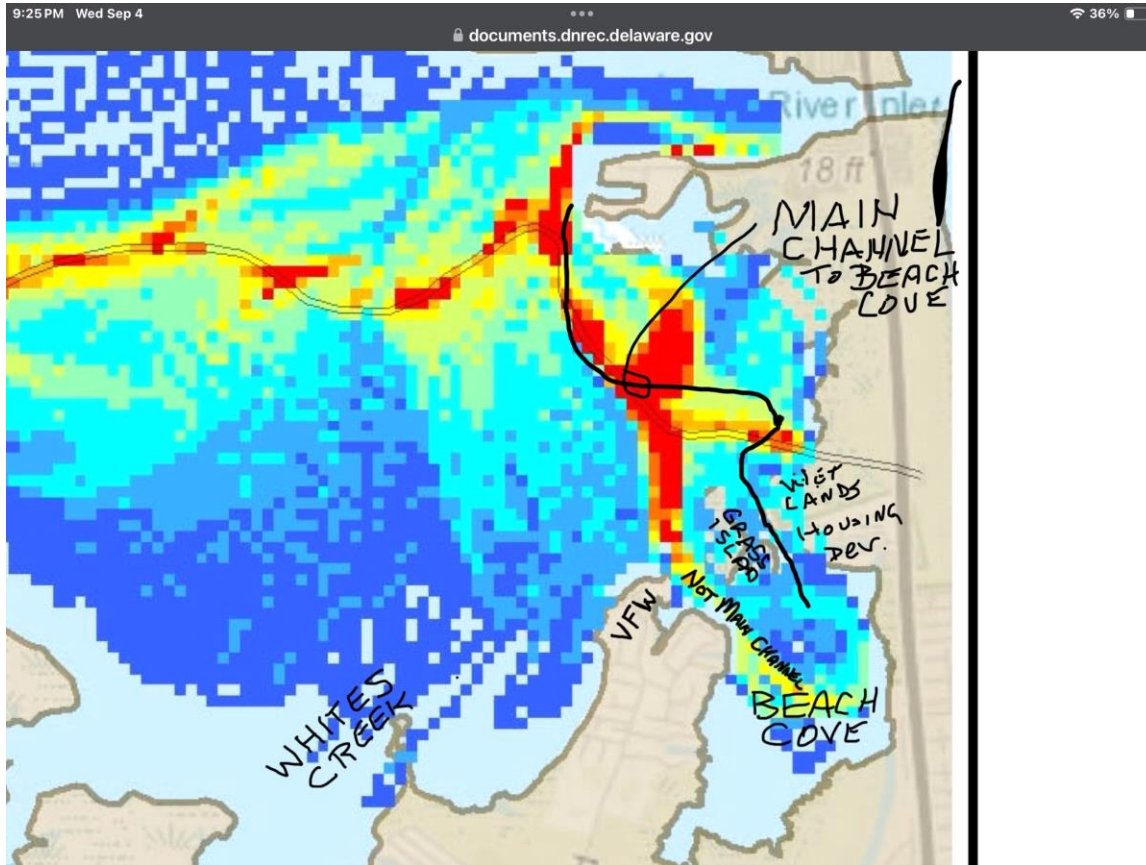


INDIAN RIVER AND INDIAN RIVER BAY SURFACE WATER AND SEDIMENT ASSESSMENT MAP 35

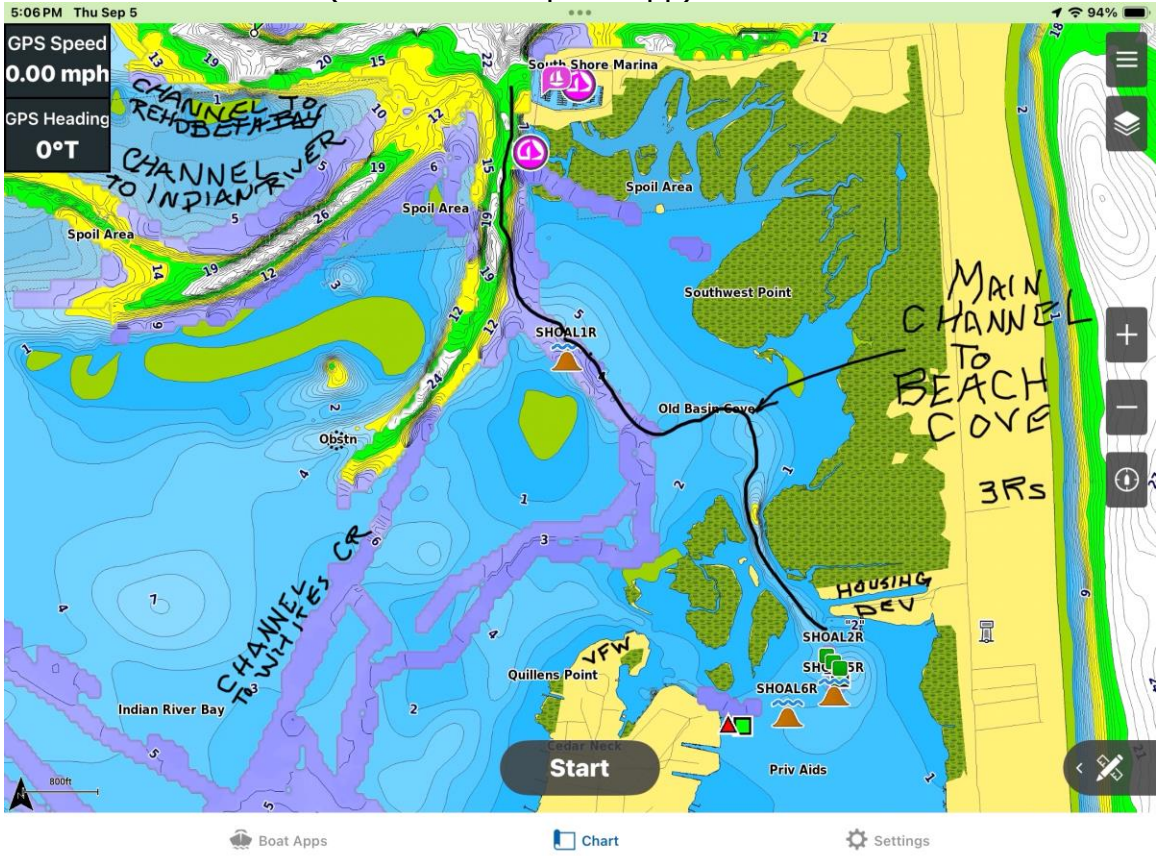


EDITED
INDIAN RIVER AND INDIAN RIVER BAY
SURFACE WATER AND SEDIMENT ASSESSMENT

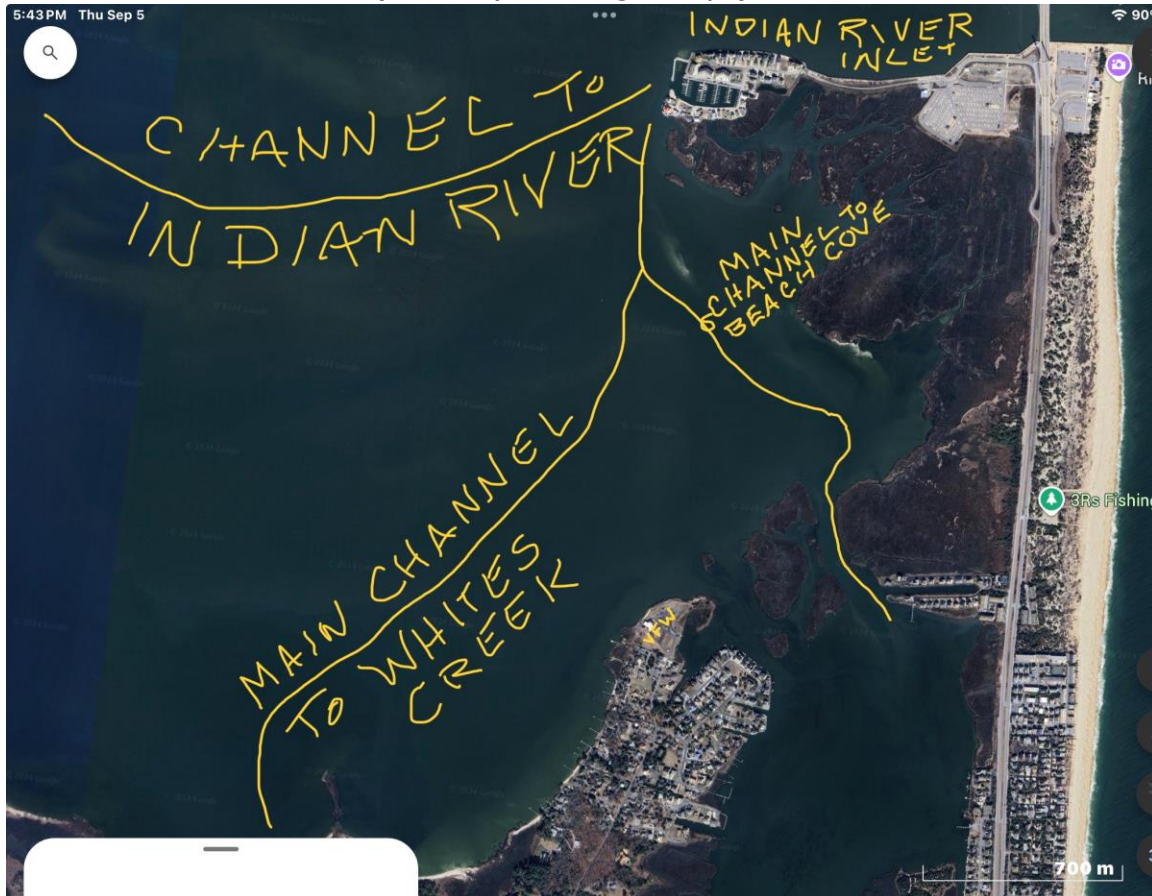
Page 31



MAP OF INDIAN RIVER BAY
from INDIAN RIVER INLET TO BEACH COVE
(from Active Captain App) as Edited



Aerial Photo of Indian River Bay to Beach Cove
(Courtesy of Google Maps) as Edited



OSHA PWER SAFETY CODE

TABLE A: MINIMUM CLEARANCE DISTANCES BASED ON VOLTAGE

| Voltage | Minimum clearance distance |
|------------------|-----------------------------------|
| Up to 50 kV | 10 ft* |
| >50 to 200 kV | 15 ft* |
| >200 to 350 kV | 20 ft* |
| >350 to 500 kV | 25 ft* |
| >500 to 750 kV | 35 ft* |
| >750 to 1,000 kV | 45 ft* |
| >1,000 kV | Determined by the utility / owner |

*According to 1926.1409, for power lines over 350 to 1,000 kV, the minimum distance is presumed to be 50 feet. Over 1,000 kV, the utility/owner or a registered engineer must establish it.

Delaware's Department of Natural Resources and Environmental Control (DNREC) regulates noise disturbances through several statutes, including: 1149 Regulations Governing the Control of Noise

Noise definition

Noise is any sound that annoys or disturbs people, or that could cause adverse psychological or physiological effects on people.

Noise disturbance definition

A noise disturbance is any sound that endangers or injures people or animals, annoys or disturbs a reasonable person, or jeopardizes property or the environment.

"Night" means the hours between 10:00 p.m. and 7:00 a.m.

"Noise" means any sound which annoys or disturbs humans, or which causes or tends to cause an adverse psychological or physiological effect on humans, excluding all aspects of noise regulated by the Federal Occupational Safety and Health Act.

"Noise Disturbance" means any sound which (a) endangers or injures the safety or health of humans or animals, or (b) annoys or disturbs a reasonable person of normal sensitivities, or (c) jeopardizes the value of property and erodes the integrity of the environment. Compliance with Sec. 71-1-6 herein shall constitute elimination of a noise disturbance.

Virginia Beach Noise Issues from Wind Farm Drilling

<https://www.wtkr.com/news/in-the-community/virginia-beach/vb-residents-say-dominion-energy-wind-turbine-project-is-causing-issues>