November 28, 2018

TO: Marin County Deputy Zoning Administrator

SUBJECT: Project ID: P2010
Assessor's Parcel: 195-331-12
Project Address: 228 Seadrift Road, Stinson Beach
Project Name: Carter Coastal Permit, Design Review and Variance

Dear Deputy Zoning Administrator,

The purpose of this second memorandum is to provide additional correspondence received since the first supplemental memorandum regarding the Carter Coastal Permit, Design Review and Variance project.

ATTACHMENTS:

Nine emails sent by the applicant and applicant's representative received from November 26, 2018 through November 27, 2018

From: Taylor, Tammy
To: Lai, Thomas
Cc: Lo-Lew, Vivian
Subject: FW: Rising sea levels
Date: Tuesday, November 27, 2018 3:17:17 PM

FYI:

From: Susan Carter <cartercasa@hotmail.com>
Sent: Tuesday, November 27, 2018 12:45 PM
To: Taylor, Tammy <TTaylor@marincounty.org>; michael mitchell <surfmitchell@att.net>
Subject: Fw: Rising sea levels

Hello Tammy!

I hope you had a nice Thanksgiving weekend. I look forward to meeting you on Thursday! I am going to send a few articles...if you could just have them added to our case file that would be fantastic. Thanks so much. Sue Carter

---

From: Susan Carter <cartercasa@hotmail.com>
Sent: Monday, October 8, 2018 10:38 AM
To: Susan Carter
Subject: Rising sea levels

https://www.climate.gov/news-features/understanding-climate/climate-change-global-sea-level

Climate Change: Global Sea Level | NOAA Climate.gov

www.climate.gov

Sea level has been rising over the past century, and the rate has increased in recent decades. In 2017, global mean sea level was 3 inches (77 millimeters) above the 1993 average—the highest annual average in the satellite record (1993-present).

From: Taylor, Tammy
To: Lai, Thomas
Cc: Lo-Lew, Vivian
Subject: FW: CHRONICLE ARTICLE ON RISING SEA LEVELS
Date: Tuesday, November 27, 2018 3:17:28 PM

FYI:

From: Susan Carter <cartercasa@hotmail.com>
Sent: Tuesday, November 27, 2018 12:47 PM
To: Taylor, Tammy <TTaylor@marincounty.org>; michael mitchell <surfmitchell@att.net>
Subject: Fw: CHRONICLE ARTICLE ON RISING SEA LEVELS

https://www.sfchronicle.com/science/article/Many-coastal-properties-may-be-flooded-out-by-13002375.php

Many coastal properties may be flooded out by 2045, climate report warns

www.sfchronicle.com

That oceanfront property in Stinson Beach you've dreamed about may not be so perfect after all. A report published Monday finds that nearly 4,400 homes in Marin ...

From: Taylor, Tammy
To: Lai, Thomas
Cc: Lo-Lew, Vivian
Subject: FW: Rising seas: "Florida is about to be wiped off the map" | Environment | The Guardian
Date: Tuesday, November 27, 2018 3:17:44 PM

FYI:

From: Susan Carter <cartercasa@hotmail.com>
Sent: Tuesday, November 27, 2018 12:48 PM
To: Taylor, Tammy <TTaylor@marincounty.org>; michael mitchell <surfmitchell@att.net>
Subject: Fw: Rising seas: 'Florida is about to be wiped off the map' | Environment | The Guardian

https://www.theguardian.com/environment/2018/jun/26/rising-seas-florida-climate-change-elizabeth-rush?utm_source=pocket&utm_medium=email&utm_campaign=pockethits

Rising seas: 'Florida is about to be wiped off the map' | Environment | The Guardian

www.theguardian.com

'Take the six million people who live in south Florida today and divide them into two groups: those who live less than six and a half feet above the current high tide line, and everybody else.'

Rising seas: 'Florida is about to be wiped off the map'

Elizabeth Rush
Tue 26 Jun 2018 07.37 EDT

Sea level rises are not some distant threat; for many Americans they are very real. In an extract from her chilling new book, Rising, Elizabeth Rush details how the US coastline will be radically transformed in the coming years

'Take the six million people who live in south Florida today and divide them into two groups: those who live less than six and a half feet above the current high tide line, and everybody else.' Photograph: Milkweed Editions

In 1890, just over six thousand people lived in the damp lowlands of south Florida. Since then the wetlands that covered half the state have been largely drained, strip malls have replaced Seminole camps, and the population has increased a thousandfold. Over roughly the same amount of time the number of black college degree holders in the United States also increased a thousandfold, as did the speed at which we fly, the combined carbon emissions of the Middle East, and the entire population of Thailand.

About 60 of the region's more than 6 million residents have gathered in the Cox Science Building at the University of Miami on a sunny Saturday morning in 2016 to hear Harold Wanless, or Hal, chair of the geology department, speak about sea level rise. "Only 7% of the heat being trapped by greenhouse gases is stored in the atmosphere," Hal begins. "Do you know where the other 93% lives?"

Sea level rise: Miami and Atlantic City fight to stay above water

A teenager, wrists lined in aquamarine beaded bracelets, rubs sleep from her eyes. Returns her head to its resting position in her palm. The man seated behind me roots around in his briefcase for a breakfast bar. No one raises a hand.

"In the ocean," Hal continues. "That heat is expanding the ocean, which is contributing to sea level rise, and it is also, more importantly, creating the setting for something we really don't want to have happen: rapid melt of ice."

A woman wearing a sequined teal top opens her Five Star notebook and starts writing things down. The guy behind her shovels spoonfuls of passionfruit–flavored Chobani yogurt into his tiny mouth. Hal's three sons are perched in the next row back. One has a ponytail, one is in a suit, and the third crosses and uncrosses his gray street sneakers. The one with the ponytail brought a water bottle; the other two sip Starbucks. And behind the rows and rows of sparsely occupied seats, at the very back of the amphitheater, an older woman with a gold brocade bear on her top paces back and forth.

A real estate developer interrupts Hal to ask: “Is someone recording this?”

“Yes.” The cameraman coughs. “Besides,” Hal adds, “I say the same damn thing at least five times a week.” Hal, who is in his early seventies and has been studying sea level rise for over 40 years, pulls at his Burt Reynolds moustache, readjusts his taupe corduroy suit, and continues. On the screen above his head clips from a documentary on climate change show glacial tongues of ice the size of Manhattan tumbling into the sea. “The big story in Greenland and Antarctica is that the warming ocean is working its way in, deep under the ice sheets, causing the ice to collapse faster than anyone predicted, which in turn will cause sea levels to rise faster than anyone predicted.”

‘Dig into geologic history and you discover this: when sea levels have risen in the past, they have usually not done so gradually, but rather in rapid surges.’ Photograph: Milkweed Editions

According to Marco Rubio, the junior senator from Florida, rising sea levels are uncertain, their connection to human activity tenuous. And yet the Intergovernmental Panel on Climate Change expects roughly two feet of rise by century’s end. The United Nations predicts three feet. And the National Oceanic and Atmospheric Administration estimates an upper limit of six and a half feet.

Take the 6 million people who live in south Florida today and divide them into two groups: those who live less than six and a half feet above the current high tide line, and everybody else. The numbers slice nearly evenly. Heads or tails: call it in the air. If you live here, all you can do is hope that when you put down roots your choice was somehow prophetic.

But Hal says it doesn’t matter whether you live six feet above sea level or sixty-five, because he, like James Hansen, believes that all of these predictions are, to put it mildly, very, very low. “The rate of sea level rise is currently doubling every seven years, and if it were to continue in this manner, Ponzi scheme style, we would have 205 feet of sea level rise by 2095,” he says. “And while I don’t think we are going to get that much water by the end of the century, I do think we have to take seriously the possibility that we could have something like 15 feet by then.”

It’s a little after nine o’clock. Hal’s sons stop sipping their lattes and the oceanographic scientist behind me puts down his handful of M&M’s. If Hal Wanless is right, every single object I have seen over the past 72 hours – the periodic table of elements hanging above his left shoulder, the buffet currently loaded with refreshments, the smoothie stand at my seaside hotel, the beach umbrellas and oxygen bars, the Johnny Rockets and seashell shop, the lecture hall with its hundreds of mostly empty teal swivel chairs – will all be underwater in the not-so-distant future.

****

One of the few stories I remember from the Bible vividly depicts the natural and social world in crisis. It is the apocalyptic narrative par excellence – Noah’s flood. When I look it up again, however, I am surprised to find that it does not start with a rainstorm or an ark, but earlier, with unprecedented population growth and God’s scorn. It begins: “When human beings began to increase in number on the earth.” I read this line and think about the 6,000 inhabitants of south Florida turning into 6 million in 120 short years. “The LORD saw how great the wickedness of the human race had become.” I think about the exponential increase in M&M’s, Chobani yogurt cups and grande lattes consumed over that same span of time. The dizzying supply chains, cheap labor and indestructible plastic. “So God said to Noah, ‘I am going to put an end to all people, for the earth is filled with violence because of them.’” And then the rain began.

I do not believe in a vengeful God – if God exists at all – so I do not think of the flood as punishment for human sin. What interests me most is what happens to the story when I remove it from its religious framework: Noah’s flood is one of the most fully developed accounts of environmental change in ancient history. It tries to make sense of a cataclysmic earthbound event that happened long ago, before written language, before the domestication of horses, before the first Egyptian mummies and the rise of civilization in Crete. An event for which the teller clearly held humans responsible.

****

Dig into geologic history and you discover this: when sea levels have risen in the past, they have usually not done so gradually, but rather in rapid surges, jumping as much as 50 feet over a short three centuries. Scientists call these events “meltwater pulses” because the near-biblical rise in the height of the ocean is directly correlated to the melting of ice and the process of deglaciation, the very events featured in the documentary footage Hal has got running on a screen above his head.

He shows us a clip of the largest glacial calving event ever recorded. It starts with a chunk of ice the size of Miami’s tallest building tumbling, head over tail, off the tip of the Greenland Ice Sheet. Then the Southeast Financial Center goes, displaying its cool blue underbelly. It is a coltish thing, smooth and oddly muscular. The ground between the two turns to arctic ice dust and the ocean roils up. Next, chunks of ice the size of the Marquis Residences crash away; then the Wells Fargo Center falls, and with it goes 900 Biscayne Bay. Suddenly everything between the Brickell neighborhood and Park West is gone.

The clip begins again and I watch in awe as a section of the Jakobshavn Glacier half the size of all Miami falls into the sea.

“Greenland is currently calving chunks of ice so massive they produce earthquakes up to six and seven on the Richter scale,” Hal says as the city of ice breaks apart. “There was not much noticeable ice melt before the nineties. But now it accelerates every year,

exceeding all predictions. It will likely cause a pulse of meltwater into the oceans."

In medicine, a pulse is something regular – a predictable throb of blood through veins, produced by a beating heart. It is so reliable, so steady, so definite that lack of a pulse is sometimes considered synonymous with death. A healthy adult will have a resting heart rate of 60 to 100 beats per minute, every day, until they don't. But a meltwater pulse is the opposite. It is an anomaly. The exception to the 15,000-year rule.

From 1900 to 2000 the glacier on the screen retreated inward eight miles. From 2001 to 2010 it pulled back nine more; over a single decade the Jakobshavn glacier lost more ice than it had during the previous century. And then there is this film clip, recorded over 70 minutes, in which the glacier retreats a full mile across a calving face three miles wide. "This is why I believe we are witnessing the beginning of the largest meltwater pulse in modern human history," Hal says.

As the ice sheets above Hal's head fall away and the snacks on the buffet disappear, topography is transformed from a backwater physical science into the single most important factor determining the longevity of the Sunshine State. The man seated next to me leans over. "If what he says is even half true," he whispers, "Florida is about to be wiped off the map."

Since you're here…

… we have a small favour to ask. More people are reading the Guardian than ever but advertising revenues across the media are falling fast. And unlike many news organisations, we haven't put up a paywall – we want to keep our journalism as open as we can. The Guardian's editorial independence means our only agenda is to provide trustworthy reporting for our readers around the world. Facts are sacred; so is our independence. So you can see why we need to ask for your help.

The Guardian's independent, investigative journalism takes a lot of time, money and hard work to produce. But we do it because we believe our perspective matters – because it might well be your perspective, too.

If everyone who reads our reporting, who likes it, helps to support it, our future would be much more secure. **For as little as $1, you can support the Guardian – and it only takes a minute. Thank you.**

Sent from my iPad

From: Taylor, Tammy
To: Lai, Thomas
Cc: Lo Lew, Vivian
Subject: FW: FEMA Flood Maps Ignore Climate Change, and Homeowners Are Paying the Price | InsideClimate News
Date: Tuesday, November 27, 2018 3:17:56 PM

FYI:

From: Susan Carter <cartercasa@hotmail.com>
Sent: Tuesday, November 27, 2018 12:50 PM
To: michael mitchell <surfmitchell@att.net>; Taylor, Tammy <TTaylor@marincounty.org>
Subject: Fw: FEMA Flood Maps Ignore Climate Change, and Homeowners Are Paying the Price | InsideClimate News

To: sue carter
Subject: FEMA Flood Maps Ignore Climate Change, and Homeowners Are Paying the Price | InsideClimate News

https://nam04.safelinks.protection.outlook.com/?url=https%3A%2F%2Finsideclimatenews.org%2Fnews%2F01112018%2Ffema-flood-map-climate-change-hurricane-mexico-beach-florida-sea-level-rise&data=02%7C01%7C%7Cec316da1eb0a46d5cfe408d64d6b677b%7C84df9e7fe9f640afb435aaaaaaaaaaaa%7C1%7C0%7C636781521014986131&sdata=aWPe816UNMX%2F5RRvcpS9vmPJghOsGmAPh1OwkzAcY2I%3D&reserved=0

Sent from my iPhone

From:	Taylor, Tammy
To:	Lai, Thomas
Cc:	Lo-Lew, Vivian
Subject:	FW: designing for flood levels above the BFE
Date:	Tuesday, November 27, 2018 3:18:06 PM

FYI:

From: Susan Carter <cartercasa@hotmail.com>
Sent: Tuesday, November 27, 2018 12:53 PM
To: michael mitchell <surfmitchell@att.net>; Taylor, Tammy <TTaylor@marincounty.org>
Subject: designing for flood levels above the BFE

https://www.fema.gov/media-library-data/20130726-1537-20490-8057/fema499_1_6_rev.pdf

Designing for Flood Levels Above the BFE - FEMA.gov

www.fema.gov

HOME BUILDER'S GUIDE TO COASTAL CONSTRUCTION 1.6: DESIGNING FOR FLOOD LEVELS ABOVE THE BFE 2 of 8 G 1 ENERAL 12/10 How High Above the BFE Should a Building

From: Taylor, Tammy
To: Lai, Thomas
Cc: Lo-Lew, Vivian
Subject: FW: National Geographic: Rising seas give island nation a stark choice: relocate or elevate
Date: Tuesday, November 27, 2018 3:18:19 PM

FYI:

From: Susan Carter <cartercasa@hotmail.com>
Sent: Tuesday, November 27, 2018 12:55 PM
To: Taylor, Tammy <TTaylor@marincounty.org>; michael mitchell <surfmitchell@att.net>
Subject: Fw: National Geographic: Rising seas give island nation a stark choice: relocate or elevate

Subject: National Geographic: Rising seas give island nation a stark choice: relocate or elevate

Rising seas give island nation a stark choice: relocate or elevate
National Geographic

Climate change means the low-lying Marshall Islands must consider drastic measures, including building new artificial islands. Read the full story

Shared from Apple News

Sent from my iPhone

From: Taylor, Tammy
To: Lai, Thomas
Cc: Lo-Lew, Vivian
Subject: FW: National Geographic: Impact of climate change is growing, and the U.S. must act, federal report warns
Date: Tuesday, November 27, 2018 3:18:27 PM

FYI:

From: Susan Carter <cartercasa@hotmail.com>
Sent: Tuesday, November 27, 2018 12:56 PM
To: Taylor, Tammy <TTaylor@marincounty.org>; michael mitchell <surfmitchell@att.net>
Subject: Fw: National Geographic: Impact of climate change is growing, and the U.S. must act, federal report warns

Subject: National Geographic: Impact of climate change is growing, and the U.S. must act, federal report warns

Impact of climate change is growing, and the U.S. must act, federal report warns
National Geographic

The 4th National Climate Assessment takes the temperature of climate change across the United States. The message? Adapt. Read the full story

Shared from Apple News

Sent from my iPhone

From: Taylor, Tammy
To: Lai, Thomas
Cc: Lo-Lew, Vivian
Subject: FW: Rising sea levels
Date: Tuesday, November 27, 2018 3:18:40 PM

FYI:

From: Susan Carter <cartercasa@hotmail.com>
Sent: Tuesday, November 27, 2018 1:08 PM
To: Taylor, Tammy <TTaylor@marincounty.org>; michael mitchell <surfmitchell@att.net>
Subject: Re: Rising sea levels

Thanks so much Tammy! I really appreciate it. See you Thursday. Sue

---

From: Taylor, Tammy <TTaylor@marincounty.org>
Sent: Tuesday, November 27, 2018 1:06 PM
To: Susan Carter; michael mitchell
Subject: RE: Rising sea levels

Hi Sue,

Thank you so much for reaching out, and yes I look forward to meeting you on Thursday. Yes, I received seven emails from you, and I will make sure that the Deputy Zoning Administrator receives them prior to the hearing.

Thank you,

Tammy Taylor
PLANNER

County of Marin
Community Development Agency
3501 Civic Center Drive, Suite 308
San Rafael, CA 94903
415 473 7873 T
415 473 7880 F
CRS Dial 711
ttaylor@marincounty.org

From: Susan Carter <cartercasa@hotmail.com>
Sent: Tuesday, November 27, 2018 12:45 PM
To: Taylor, Tammy <TTaylor@marincounty.org>; michael mitchell <surfmitchell@att.net>

Subject: Fw: Rising sea levels

Hello Tammy!

I hope you had a nice Thanksgiving weekend. I look forward to meeting you on Thursday! I am going to send a few articles...if you could just have them added to our case file that would be fantastic. Thanks so much. Sue Carter

---

From: Susan Carter <cartercasa@hotmail.com>
Sent: Monday, October 8, 2018 10:38 AM
To: Susan Carter
Subject: Rising sea levels

https://www.climate.gov/news-features/understanding-climate/climate-change-global-sea-level

Climate Change: Global Sea Level | NOAA Climate.gov

www.climate.gov

Sea level has been rising over the past century, and the rate has increased in recent decades. In 2017, global mean sea level was 3 inches (77 millimeters) above the 1993 average—the highest annual average in the satellite record (1993-present).

Email Disclaimer: https://www.marincounty.org/main/disclaimers

From:	Taylor, Tammy
To:	Lai, Thomas
Cc:	Lo-Lew, Vivian
Subject:	FW: #228 scan #1
Date:	Tuesday, November 27, 2018 3:18:43 PM
Attachments:	Image_20181126_0001.pdf SupplementalMemorandumDZA_2.docx

---

From: michael mitchell <surfmitchell@att.net>
Sent: Monday, November 26, 2018 4:41 PM
To: Taylor, Tammy <TTaylor@marincounty.org>
Subject: Fw: #228 scan #1

oops, forgot to attach file. hi t, please find pdf & orifginal note below.
tnx,
mm

----- Forwarded Message -----
From: michael mitchell <surfmitchell@att.net>
To: Tammy Taylor <ttaylor@marincounty.org>
Sent: Monday, November 26, 2018, 4:33:52 PM PST
Subject: #228 scan #1

Good Afternoon TTaylor,

Hope you had a nice long weekend.
We did well here in Stinson.

I am writing in regard to the pdf below, and the pdf in the email to follow.
We are interested in displaying either or both of these images on your digital screen on Thursday at the DZA Hearing.

With the screen in mind, 2-questions:

1. Will these files read & displa
2. May we rotate both images 90 degrees to a horizontal forma

If I need to adjust my files, it would be nice to know sooner than later.
Thank you for considering these matters.

Best,
MM
415.868.0449

#258 SEADRIFT RD. TO #242 SEADRIFT RD.

#236 SEADRIFT RD. TO #218 SEADRIFT RD.

11/26/18