

**Re: Daily on Energy, presented by GAIN: Rift grows in GOP over climate change
... Greens celebrate Endangered Species Day**

From: Thomas Wysmuller <(b)(6)>
To: William Happer <b6>
Cc: Bridenstine James <james.f.bridenstine@nasa.gov>, Singer S. Fred <b6>, Bridenstine, James F. (HQ-AA000) </O=NASA/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=Bridenstine, James F 8724750558df>
Sent: May 19, 2018 11:12:32 AM EDT
Received: May 19, 2018 11:12:44 AM EDT

Hi, Wil:

I'll embed my reaction within your e-mail

On May 19, 2018, at 8:27 AM, William Happer <b6> <mailto:b6> > wrote:

Dear Tom,

Thanks for the assessment. With respect to Fred Singer's WSJ Op Ed, I was surprised to read what seemed to be a statement that the rate of sea level rise is "accelerating." I don't see that in the tide gauge data. Neither do I. Could this be another editorial improvement? Quite likely. Fred told me he is limited to typing with only one hand, and was having a difficult time doing so. I asked him to send me the final WSJ submission (that I was originally supposed to get prior to its delivery), and he thinks it may have been accidentally erased. Some of the "factoids" that I talked to Fred about ended up in his thinking, but the floating Ross Ice Shelf contributing to SLR was not one of them. He did use some of the Zwally paper's conclusions, but reference to it was either omitted or deleted by the WSJ.

And how Bridenstine or anyone else can say that humans are a major cause of warming is a puzzle to me. I'll go along with humans playing a major role in the increase of CO2 in the atmosphere, from a relatively steady 280ppm for the past two thousand years +, to over 400ppm, starting in the late 1700s, but oceanic warming did not follow at anything near the CO2 increase rate. Whatever warming we have had over the past 50 or so years is indistinguishable from many previous warmings. You are absolutely correct!!! Per EPICA and Vostok, the past three interglacials each were warmer than the present, and there were no factory or transportation emissions helping boost temperatures along back then.

I still believe Jim Bridenstine was trying to diffuse what is essentially a non mission-critical issue, as the Potomac estuary will not inundate NASA Headquarters anytime soon, or within anyone's lifetime either. NASA is an agency far different than the one I worked in during the Apollo days, and the challenge Jim faces will be getting it back to a no-nonsense, measured and validated data orientation. Catastrophic SLR and runaway temperature rise is part of the nonsense, and he will be wise to systematically sidestep it for the short term.

Tom

Will

From: Thomas Wysmuller <(b)(6)> <mailto:(b)(6)>]
Sent: Saturday, May 19, 2018 3:40 AM
To: William Happer
Cc: Bridenstine James; Singer S. Fred

th&af_sub3=EmailSignature>

On Sun, Mar 3, 2019 at 8:28 PM, William Happer

b6 <mailto:**b6**> > wrote:

Dear Hal,

By chance, Tom Wysmuller stopped by my office on Saturday, and I showed him a copy of the attached draft paper that **b6** and I hope to finish soon. Tom urged me to send you a copy, even without asking permission which I would normally do. If you have time to look it over and provide feedback on how to make it more useful to a wider readership, **b6** and I would be very grateful.

We hope to publish the paper in a journal like Reviews of Modern Physics for readers who are not intimidated by integral equations or quantum mechanics. But we also hope that it will be useful to smart readers without a lot of mathematics background.

Key parts that require almost no math are Figs. 9-11, which show how little you change the infrared flux leaving the Earth if you double the concentrations of CO₂, N₂O or CH₄. Table 4 shows the correspondingly small temperature changes needed to restore thermal equilibrium if you double the concentrations.

We would be very pleased to get some feedback.

Best wishes,

Will