

From: Andrew Janca
Sent: Sunday, April 2, 2023 8:32 PM
To: andrew.janca.2@outlook.com
Cc: andrew.janca@fema.dhs.gov; andrew.janca.2@outlook.com
Subject: National risk. Pandemics, pp. 173-86. Deaths from electric power loss 197-98. Tornadoes 217-30. Chemical accidents 253-78. Industrial accidents 563-79. Bridge failure 295-306. Flood 165-72. Solar storm 197-215. Terrorism 307-78. Climate change 472-88
Attachments: Strategic National Risk Assessment (SNRA) 2015 - Consolidated unclassified documentation.pdf; Full unclassified 2015 documentation.zip; Context and justification for lawful disclosure (5 USC 2302).zip; Attachment list April 2023.pdf

Hello -- This is a lawful but un-authorized disclosure under the Federal whistleblower law (5 U.S.C. § 2302). I am not speaking for DHS or FEMA. Everything is unclassified. There is no connection to anything in the news right now. Details below.

The Strategic National Risk Assessment (SNRA) is the national risk assessment that the U.S. national preparedness system is based on (https://www.fema.gov/sites/default/files/2020-06/national_preparedness_goal_2nd_edition.pdf pp. 4-5). Its unclassified documentation (attached) was supposed to go out to every state, tribal, territorial, Federal, and community emergency manager in the Nation in 2015, but it got buried instead. Its disappearance broke a lot of things.

I was the technical lead for FEMA's 2015 update. I was supposed to get this to you seven years ago, but I didn't. I'm sending this fully unclassified documentation to you myself now because FEMA is misleading our elected leaders about what its risk data actually says (*Context.zip* / *Cover letter...doc* page 3, *Detail...pdf* page 3). I'm sending it to all of you [one state at a time, a few recipients at a time, to avoid overloading my own email filters] because I don't have any way to make my organization stop lying about the science that I'm responsible for, except to make it impossible to lie about it any more.

I am not speaking for DHS or FEMA in this letter. I'm cc-ing them for their awareness, not to suggest their endorsement.

SNRA 2011 unclassified documentation

The unclassified version of the original (2011) SNRA's documentation is included in the 2015 SNRA's documentation as the second half (pp. 235-446) of the SNRA 2015 technical appendix, inside the second attachment. A free-standing version of this document is at [https://5usc2302.github.io/risk/Fulldocumentation/SNRA 2011 unclassified documentation.pdf](https://5usc2302.github.io/risk/Fulldocumentation/SNRA%2011%20unclassified%20documentation.pdf).

1/2 – Documentation.

The first attached is a consolidated single-volume version of the unclassified documentation of record. The latter is in the second attached. Page numbers below refer to the first attached.

Everything is 100% unclassified.

Some relevant parts (note that not everything below is bad):

- **Pandemics.** Relative risk, p. 27 (figure 2a). Detail, pp. 173-186, 593-596.

- **Electric grid** related risks. The SNRA's power loss mortality model (pp. 1-2, *Context.zip / SNRA follow-up letter 20201016.pdf* or https://5usc2302.github.io/risk/short/SNRA_follow-up_20201016.pdf) is primarily documented in the space weather chapter, pp. 197-198, 201, 204-205. The low estimate (which the SNRA uses for its own numbers) is 1.8 deaths/million people-days. The high estimate which accurately predicted Maria's deaths is 11.25 deaths/million people-days.
 - **Physical attack on the electric grid**, pp. 365-377.
 - **Electric grid failure (natural/accidental)**, pp. 503-508.
 - **Cyber-attacks** on the electric grid, pp. 642-645.
 - **Space weather**, pp. 27 (figure 2b), 197-215.
- **Climate change**, pp. F-21 - F-23 [front insert], 472-488, 559-560.
 - The final (2016) versions of the maps on pp. 485-488 are in www.rand.org/pubs/research_reports/RR1400/RR1453/RAND_RR1453.pdf.
- **Drought**, pp. 147-154.
- **Earthquakes**, pp. 155-164.
 - **Tsunamis** (Cascadia scenario), pp. 411-416.
- **Heat waves**, pp. 509-514.
 - The missing low/best/high frequencies in the data table on page 514 are 0.14 / 0.29 / 3 events/year respectively [1]. For annualized risk comparisons, the average (1,500 deaths / year) of the 1,000-2,000 deaths/year range on page 511 is a suitable best estimate. [2]
- **Hurricanes**, pp. 27 (figure 2b), 187-196.
- **Floods**, pp. 165-172.
- **Tornadoes**, pp. 217-230.
- **Volcanoes** (Mount Rainier scenario), pp. 417-424.
- **Wildfires**, pp. 231-236 and 537-538.
 - **Fires and explosions** of generally unintentional origin, pp. 269-278, 527-542, 563-569.
- **Winter storms**, pp. 237-246.
- **Radiological accidents** (nuclear power plant accidents), pp. 287-294.
- **Chemical accidents** (some of these are also listed above):
 - **Toxic inhalational hazards**, pp. 253-268.
 - **Flammable/combustible rail** accidents (train explosions), pp. 269-278.
 - **Industrial accidents** (fire, explosions) (static sites), pp. 563-580.
 - **Pipeline failures** (including oil spills on land), pp. 519-526.
 - **Oil spills** (maritime), pp. 515-518.
- **Dam failure**, 279-286.
- **Biological food contamination** (food poisoning), pp. 247-251.
- **Bridge failure** (Transportation Systems Failure), pp. 295-306.
- **Migrant surges / mass migration**, pp. 543-562.
 - DHS defines risk as the potential for an *unwanted* outcome (SNRA terms of reference page 1 footnote 4, https://5usc2302.github.io/risk/short/SNRA_terms_of_reference_20110709.pdf), not a bad outcome. Border surges are unwanted events, but the people in them are good.
- **Energy, food, water, and supply chain** risks to society, pp. 465-468, 479-480, 638-641.
- **Artificial intelligence, cognitive enhancement, nanotechnology** (brief overviews), pp. 469-471.
 - Other than these, the most relevant source for "future" risks that I know of is the 2010 Project on National Security Reform's Vision Working Group scenario set, <https://apps.dtic.mil/sti/pdfs/ADA526455.pdf> pp. 37-77.
- **Terrorism and political violence** (non-state actors):
 - Unclassified conventional and 2015 cyber-terrorism analyses, pp. 58-60, 307-378, 501-649.
 - Details that the SNRA omits in its own tables are in their cited sources (most are in pp. 57-66 of https://www.fbi.gov/file-repository/stats-services-publications-terrorism-2002-2005-terror02_05.pdf).
 - Unclassified portions of CBRN and 2011 cyber-terrorism analyses, pp. 61-66, 379-408.
 - The classification (pp. 451-454 black text [blue text is superseded]) of most of the SNRA's CBRN risk numbers unfortunately leaves a big hole for most users, including me (I gave up my clearance years ago) [3]. There are some insurance numbers in the last attached (*Context...zip / Supporting files and context / Other / CBRN probabilities in insurance models.xls*) which may be helpful.

- **Nation-state attacks** are not in the 2015 SNRA, **but comparable numbers are public** [4].

[1] Low frequency: $0.14 = 1/7$ years, the longest gap between events in table 7 (p. 513). Best estimate frequency (which is missing from the data table on page 514 because I [incorrectly, in retrospect] decided that we should leave it blank) = 0.29/year, 6 events in 21 years (p. 512). High frequency = 3 / year (max # of events in one year [1999]).

[2] Since most fatality risk comes from heat events outside the 100+ fatality threshold for this SNRA hazard, the 1,000 – 2,000 deaths / year number referenced on page 511 is more appropriate for annualized risk comparisons than the 73 deaths / year average of the threshold set (258 average deaths / event times 0.29 events / year).

[3] The National Planning Scenarios (<https://web.archive.org/web/20140502084541/https://www.llis.dhs.gov/sites/default/files/NPS-LLIS.pdf>) are a great source for consequence numbers, but they don't include likelihood estimates.

[4] FEMA's last (1983) published probability estimate for nuclear war (0.1% per year) is similar to Lloyd's estimate today (0.11% per year). Post Cold War public USG likelihood estimates for nation-state attacks range from 0.24% to 1% for steady-state conditions, and 10% in years of heightened risk. See the document *Public USG and insurance probability estimates, nuclear war.pdf* in the zipfile (*Context.zip* / *Supporting files and context* / *Other* / *Public USG...pdf*), or at https://5usc2302.github.io/risk/References/Other%20cited/Public_USG_and_insurance_probability_estimates_nuclear_war.pdf [[permalink https://web.archive.org/web/20220921011919/https://5usc2302.github.io/risk/References/Other%20cited/Public_USG_and_insurance_probability_estimates_nuclear_war.pdf]].

Document notes

The attached documents are filesize-optimized PDFs with the draft marks crossed out, and vector graphics which preserve the documents' original appearance when printed (*Full unclassified documentation.zip* / *Document notes.doc*). The original draft-marked electronic versions are at <https://web.archive.org/web/20230227163319/https://5usc2302.github.io/risk/Full%20documentation/Original%20versions/>. More detail, see *Document notes.doc* inside the documentation zipfile.

2/2 – Context and justification for lawful disclosure.

This email/letter is divided in two parts (#1/2 documentation, #2/2 context) to mirror the two-email structure that many of the attachments are keyed to because they might be confusing otherwise. The documentation (#1/2) description is above, and the context and justification for disclosure (#2/2) is in the attached zipfile *Context...zip*.

I've put the rest of this email in *Context...zip* as a rough cover letter (*Cover letter...doc*) because it's lengthy, and secondary to the purpose of this letter (getting the attached documentation to you).

Notes

I assembled this national mailing list of county-level emergency management coordinators myself from public sources: the most recent best source I found for Pennsylvania (<https://www.pema.pa.gov/County-EMC/Pages/default.aspx>) was last updated two months ago, so I realize that some of the information may have changed since. If you think I might have included you in error, I apologize. Regardless of your current position, please use this risk information however it may be useful, and please forward it to colleagues who may also find it useful.

In addition, if you recently held a civil defense, emergency management, homeland security, or public health emergency coordinating position for your county, city, town, or state but no longer do, if you could also please forward this to your colleagues in your old job I would appreciate it very much.

I am not speaking for my Department or Component (DHS/FEMA), any past or present DHS organization, or any past or present colleagues. I will forward this email and attachments to other parts of DHS, FEMA, and other Federal parts, including my own management, once I've finished sending these letters to other states.

Everything is unclassified, and non-security sensitive.

The information that these letters, attachments, and links communicate is explicitly within the scope of 5 U.S.C. § 2302 (the Federal whistleblower law), and communicated solely for its lawful purposes.

I apologize for the awkwardness of this letter.

Andrew Janca, PhD

andrew.janca.2@outlook.com (this account)

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Attachment links. The attachments to this email are also at

- 1) [https://web.archive.org/web/20211231153713/https://5usc2302.github.io/risk/Strategic%20National%20Risk%20Assessment%20\(SNRA\)%202015%20-%20Consolidated%20unclassified%20documentation.pdf](https://web.archive.org/web/20211231153713/https://5usc2302.github.io/risk/Strategic%20National%20Risk%20Assessment%20(SNRA)%202015%20-%20Consolidated%20unclassified%20documentation.pdf)
(first attachment)
- 2) https://web.archive.org/web/20230228100916/https://5usc2302.github.io/risk/Full%20documentation/Full_unclassified_2015_documentation.zip (second attachment)
- 3) https://web.archive.org/web/20230331103455/https://5usc2302.github.io/risk/5_U.S.C._2302_justification/20230301/Context_March_2023.zip (third and fourth attachments)