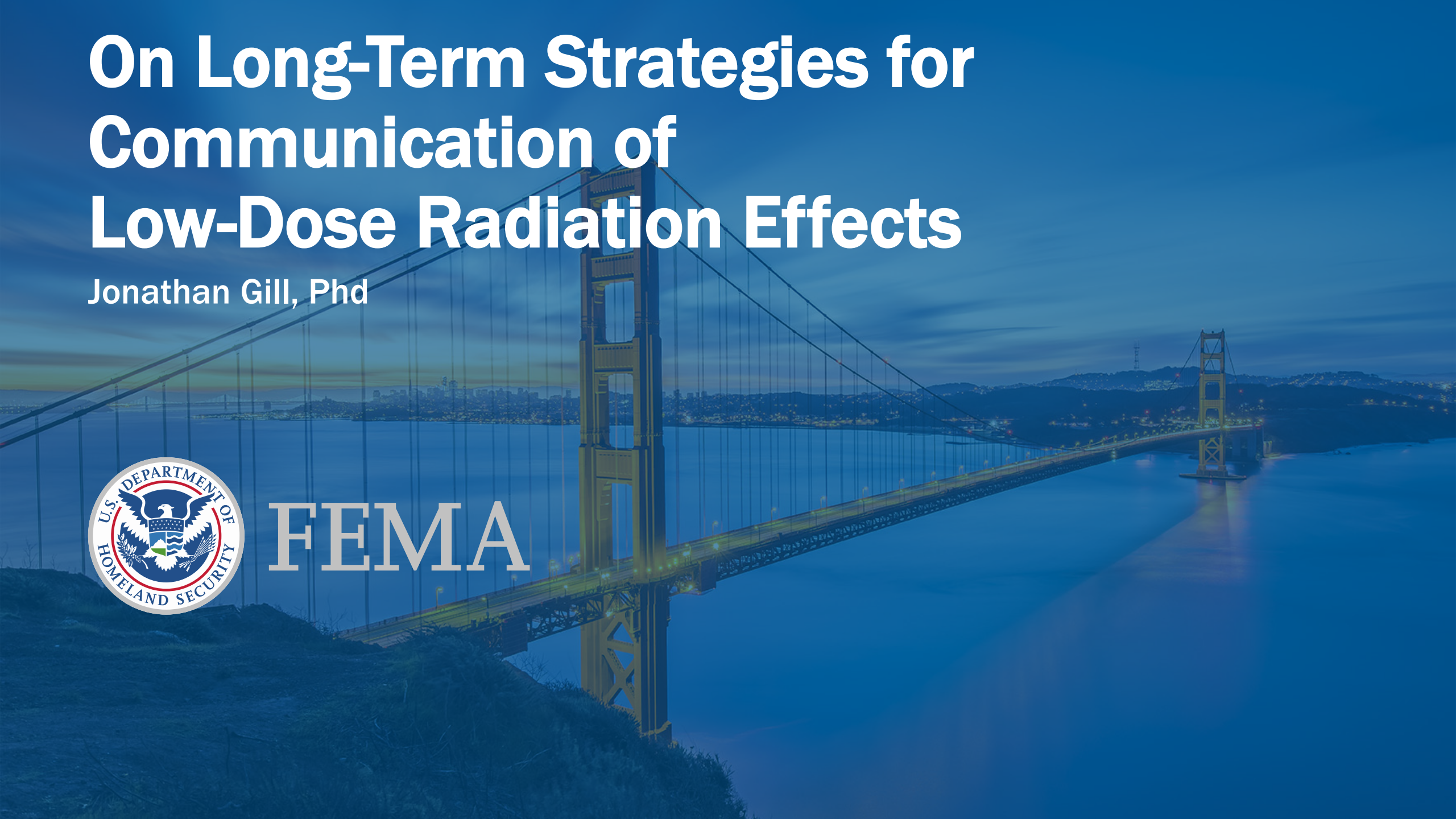
On Long-Term Strategies for Communication of Low-Dose Radiation Effects

Jonathan Gill, Phd



Context

- I work within DHS/FEMA's CBRN Office.
- Daily focus on preparedness for radiological and nuclear
  - consequence management;
  - disaster/emergency operations; and
  - intersection of crisis response and consequence management.
- Full range of radiation exposure including low dose, but with a focus on moderate to high exposure.

Answering the Committee's Questions

- During blue skies DHS predominately communicates on matters of low dose effects with other governmental organizations. However, the Radiological Emergency Preparedness (REP) program does work on communications with the public.
- DHS engages with governmental organizations through formal and informal relationships, directed partnerships, exercising, and real-world operations.
- Conversation around low dose radiation for disasters is often overshadowed by understanding and protecting against Acute Radiation Syndrome (ARS) dose levels. As a result, ARS gets most of the attention and low dose effects receives little attention. Generally governmental and responder audiences are hesitant of radiation exposure unless they are well versed in radiation exposure, in which case their actions are measured based on the risk.

Answering the Committee's Questions

- There is a difference between members of the public and the scientific community in perceived risk from radiation. And in this case first responders, first receivers, and specialized response teams (HAZMAT, USAR, etc.) with basic training are extremely risk adverse. This aversion appears to most often derive from a lack of understanding or preconceptions about radiation's effects and risk to people. On the other hand, members of the scientific community run a wide range of responses from overconfident, through measured response, to approaching risk aversion on the level that we often see from the public.
- A variety of consist and easy to understand tools (graphics) are useful to help compare risk to other, more well known or common risks that people encounter. However, preconceptions can dominate the conversation so training and preparation for communicators is crucial to understanding how best to approach pre-conceptions on zero tolerance. In exercises and training, there is usually acceptance of certain safe levels of radiation, however this is inconsistent with real world events.

Answering the Committee's Questions

- Public messaging through the state and local governments, organizations, and community leaders are, by far, the most effective means of communication. In the case of radiation exposure, clearly defining the actions that the public should take is critical to effective response.
- We assess the effectiveness of communications strategies through social media activity; reports from cooperating governments, non-governmental organizations, and community groups; and metrics from reporting entities like hospitals and community reception centers.
- Risk Communication is lead by DHS and FEMA External Affairs. Agency leadership receives some training this often general to effective communication to the public and media, with a component of risk communication.

Answering the Committee's Questions

- We exercise communications in tabletops and other types of exercises, which often include communication training objectives. For radiation related communication, these range from agricultural effects to short- and long-term human health effects.
- I'm not familiar with the new low-dose program, however having aides and tools to make the dose and its effects relatable and a certain as possible would be very helpful.
- What are in your view some high-priority research questions the program should try to address?
  - How to manage mis-information in the age of the internet?
  - How best to leverage the new pathways in which citizens receive information?
  - Continue to investigate if and how low dose radiation is connected to human health outcomes so that definitive actions and answer are available to communicators.
  - Further research into protective action guidelines regarding water consumption.