

NRC Public Meeting

Executive Order 14300: Reforming and Modernizing the NRC's Radiation Protection Framework

August 10, 2026



Agenda

- ☐ Meeting Logistics
- ☐ Introductions
- ☐ NRC Presentation
- ☐ Public Q&A



Meeting Logistics

- ☐ Meeting Type: Information Meeting
- ☐ **Comments must be submitted in writing to [regulations.gov](https://www.regulations.gov).** We will not be accepting comments on the proposed rule during this meeting.
- ☐ Participants are in listen-only mode until the designated question and answer period
- ☐ Please follow meeting participation guidelines
- ☐ No regulatory decisions will be made at today's meeting

Purpose

The purpose of this meeting is to inform the public about Executive Order (EO) 14300 proposed rule W1-2, Reforming and Modernizing the NRC's Radiation Protection Framework.

Please note that this meeting's primary purpose is to provide the public with NRC staff insights on the proposed rule. While members of the public are encouraged to ask questions, all comments on the rulemaking proposal should be submitted via [regulations.gov](https://www.regulations.gov) to ensure they receive appropriate consideration by NRC staff.



NRC Staff

Mike Franovich	SES Champion	RES
David Garmon	Technical Staff	NRR
Sarah Spence	Technical Staff	NMSS
Lance Rakovan	Meeting Facilitator	NRR

NRC Mission Statement

The NRC protects public health and safety and advances the nation's common defense and security by enabling the safe and secure use and deployment of civilian nuclear energy technologies and radioactive materials through efficient and reliable licensing, oversight, and regulation for the benefit of society and the environment.



The background is a collage of four images: top-left shows industrial machinery with blue and yellow components; top-right shows a sunset or sunrise sky with orange and blue clouds; bottom-left shows a close-up of a hand holding a compass; bottom-right shows a forest at dusk or dawn with trees silhouetted against a dark sky.

Reforming and Modernizing the NRC's Radiation Protection Framework

Topics

- Background information
- Overview of proposed rule
- Public Q&A

Key Terms

(Plain Language Descriptions)

Determinate – Fixed, having a clearly defined limit (e.g., speed limit)

Deterministic Health Effect – Outcome is predictable, no randomness. Threshold of effect can be determined, typically through experiments (e.g., sun burn).

Stochastic Health Effect – Outcome is random, based on chance. Existence and value of threshold of effect is uncertain (e.g., skin cancer from sun exposure)

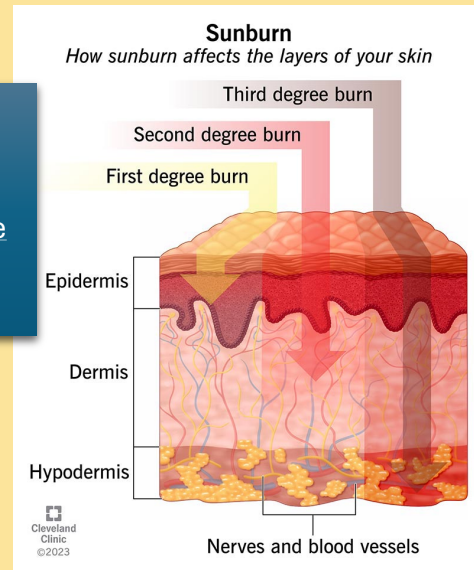
Patient – A person who has recently received radioactive material for treatment

Caregiver – An adult who cares for a patient, typically a loved one or friend, and is not paid to do so

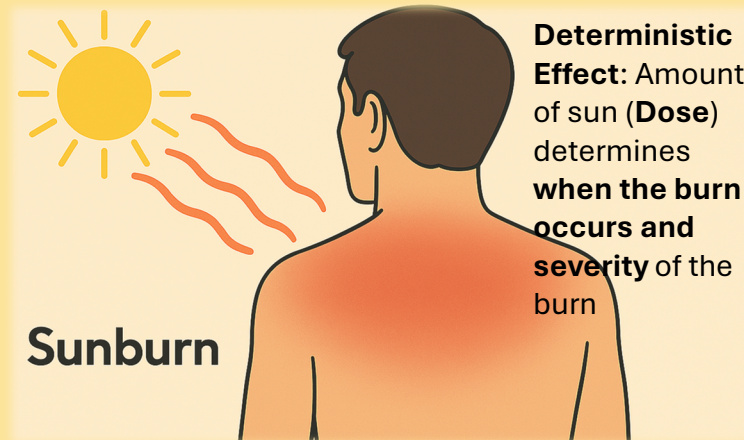
Graded approach – Decision-making process that takes account of the risks associated with the activity

Example: Effects of Sun Overexposure

The severity (degree) of sunburn depends on the amount of sun exposure

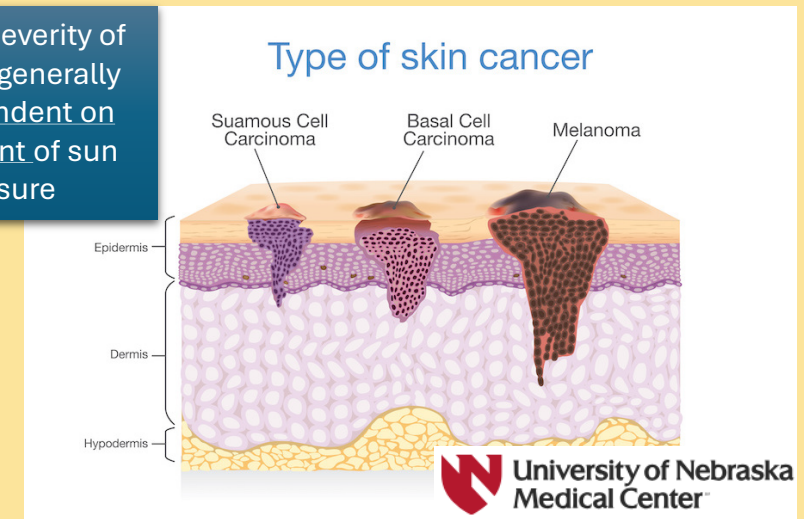


<https://my.clevelandclinic.org/health/diseases/21858-sunburn>

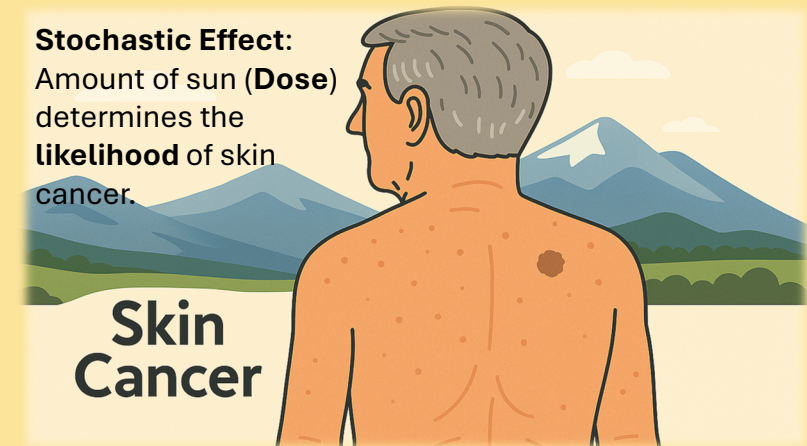


Note: A limit on sun exposure avoids the effect

The type/severity of cancer is generally not dependent on the amount of sun exposure



<https://www.unmc.edu/cancercenter/outreach/cancer-prevention-resource-library/skin-cancer.html>



Note: A limit on sun exposure reduces the likelihood of the effect

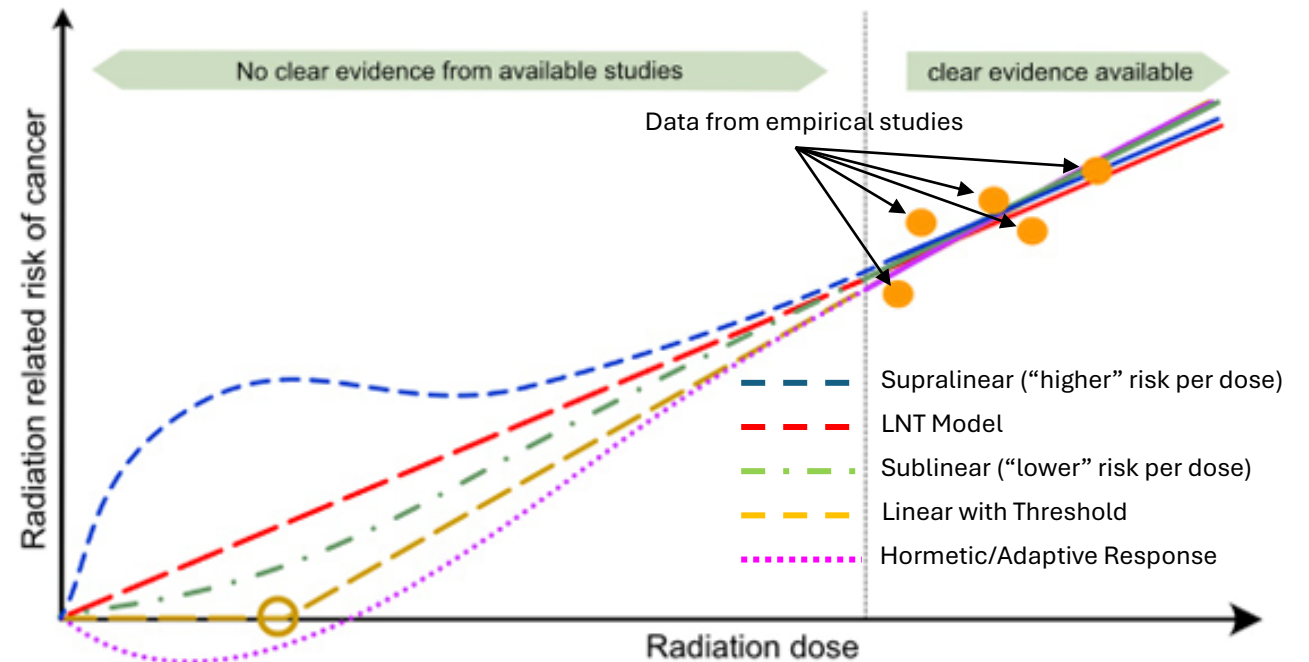
Radiation Dose Response Models

- **Stochastic Health Effects**

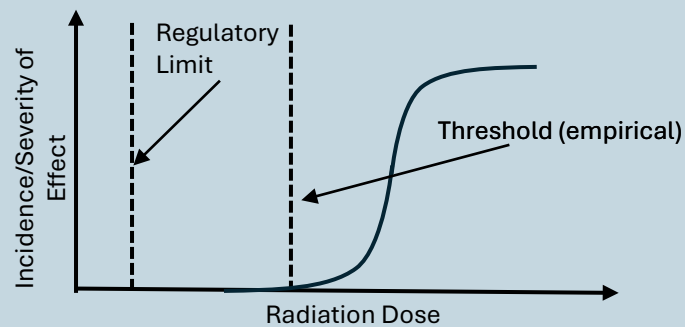
- Severity of stochastic effects independent of dose
- Threshold not defined
- In general, models are based on studies that explore effects of high doses (i.e., higher than NRC-regulated activities)
- No clear evidence of relationship at low doses

Radiation Dose Response Models (Stochastic Health Effects)

Adapted from: Maria Schnelzer et al 2025 J. Radiol. Prot. 45 033001



Radiation Dose Response for Deterministic Health Effects



- **Deterministic Health Effects**

- Threshold determined by experiment (empirical)
- Effects can be prevented by limits that are threshold-based

Regulatory Experience

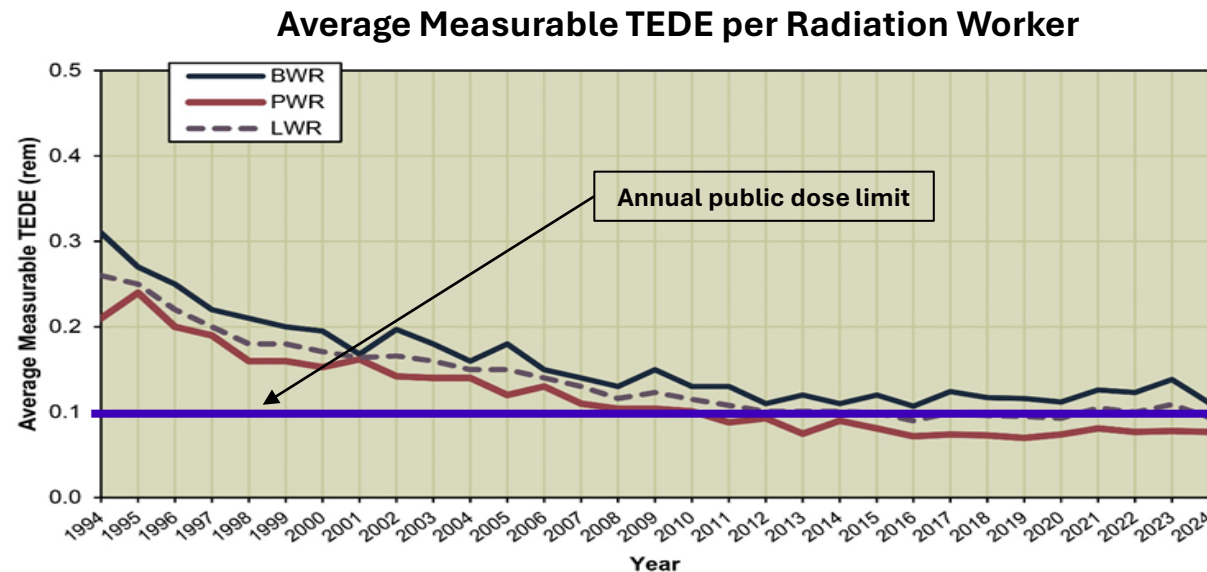
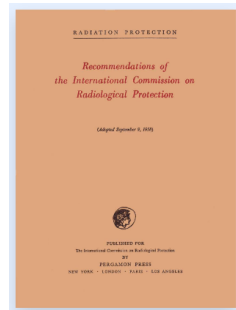


Figure adapted from Fig 4-3 NUREG-0713, Vol 46 (ML26069A604)

What power reactor industry expends to avert dose

What is reasonable to NRC

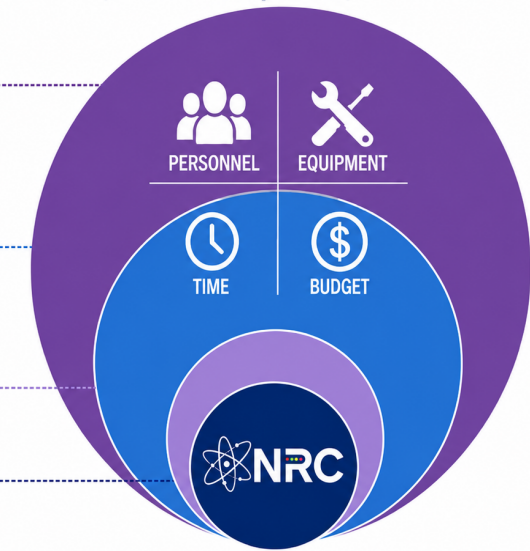
Industry Maximum (~80,000)

Industry Average (~20,000)

Industry Minimum (~6,000)

NRC Benchmark (5,200)

Resources per Unit Dose**



*ICRP, 1959. Recommendations of the International Commission on Radiological Protection. Now known as ICRP Publication 1. Pergamon Press, New York.

** Resources are measured in dollars per person-rem. Industry values are from a 2010 survey conducted by North American Technical Center (NATC), Information System on Occupational Exposure (ISOE), Nuclear, Plasma and Radiological Engineering (NPPE), The Grainger College of Engineering, University of Illinois at Urbana-Champaign (non-public). NRC benchmark is from NUREG-1530, Revision 1 (ML22053A025).

Overview of Proposed Rule

Keep Current Dose Limits: The NRC's radiation safety standards are the dose limits: quantifiable, bounded, enforceable and science-based.

Reconsider ALARA: Concept has been misinterpreted to require continuous dose reduction. Proposal restores balance in light of small risks at low doses and raises the standard for regulatory clarity. This proposal does not lower the standard for safety.

Adopt Risk-Informed, Performance-Based Approach: Align regulatory approaches with risks.

Enable Regulation: Add flexibilities and efficiencies that maintain safety.

Topical Areas

ALARA

Dose Limits

- Occupational
- Public

Protection of Caregivers

Effluent Reform

Administrative Improvements

- Dosimetry Methods
- Respiratory Protection
- Required Monitoring
- Accident Analysis Acceptance Criteria

ALARA

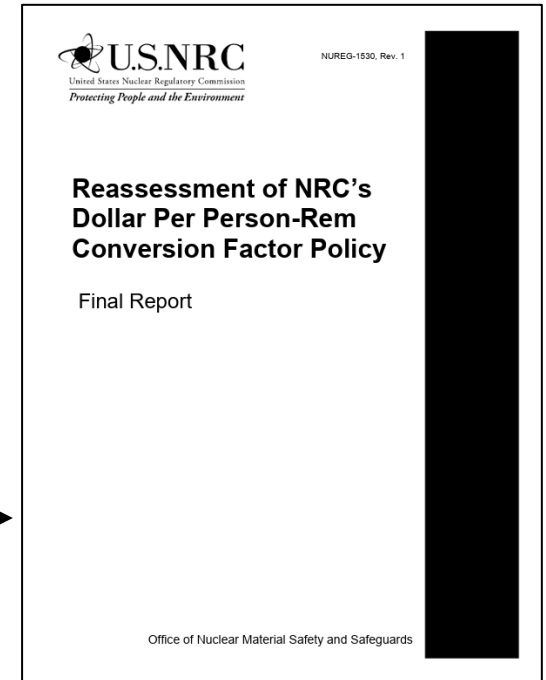
Proposed Rule Changes: Replacing often misapplied ALARA with clearer, more objective requirements focused on compliance with regulatory precautions and established dose limits.

What This Means: Restoring the original intent of ALARA by making it clear that continuous dose reduction is not necessary for regulatory compliance. Licensees and applicants would use a graded approach to dose management to manage doses below the limits.

Graded Approach to Dose Management

Precautionary Requirements for Occupationally Exposed Individuals and Required Actions		
Dose-Based Threshold		Description of Required Action
Annual Basis	Hourly (or Other) Basis	
	Prior to any exposure	Determine if individual qualifies as occupationally exposed individual or member of the public. If member of the public, ensure compliance with limits of 20.1301. If occupationally exposed individual, ensure compliance with limits of 20.1201.
	At any level of exposure (as applicable)	Surveys (10 CFR 20 Subpart F) Access Controls (10 CFR 20 Subpart G) Posting and Labeling (10 CFR 20 Subpart J)
≤ Public dose limit		Evaluate likelihood of exceeding public dose limit to ensure compliance with radiation worker training requirements of 10 CFR 19.12
> Public dose limit		Complete radiation worker training per 10 CFR 19.12
> 10% of applicable occupational limit(s)	Entering High Radiation Area	Individual monitoring required per 10 CFR 20.1502.
Approaching annual occupational dose limit(s)		Evaluate need for additional radiation protection measures using a graded approach such as cost-benefit analysis
> Annual occupational dose limit(s)		Planned occupational dose limit extension (DLE) or planned special exposure (PSE) provisions shall be applied for exceedances of the dose limit per 10 CFR 20.1205 or 20.1206.

Additional radiation protection measures?



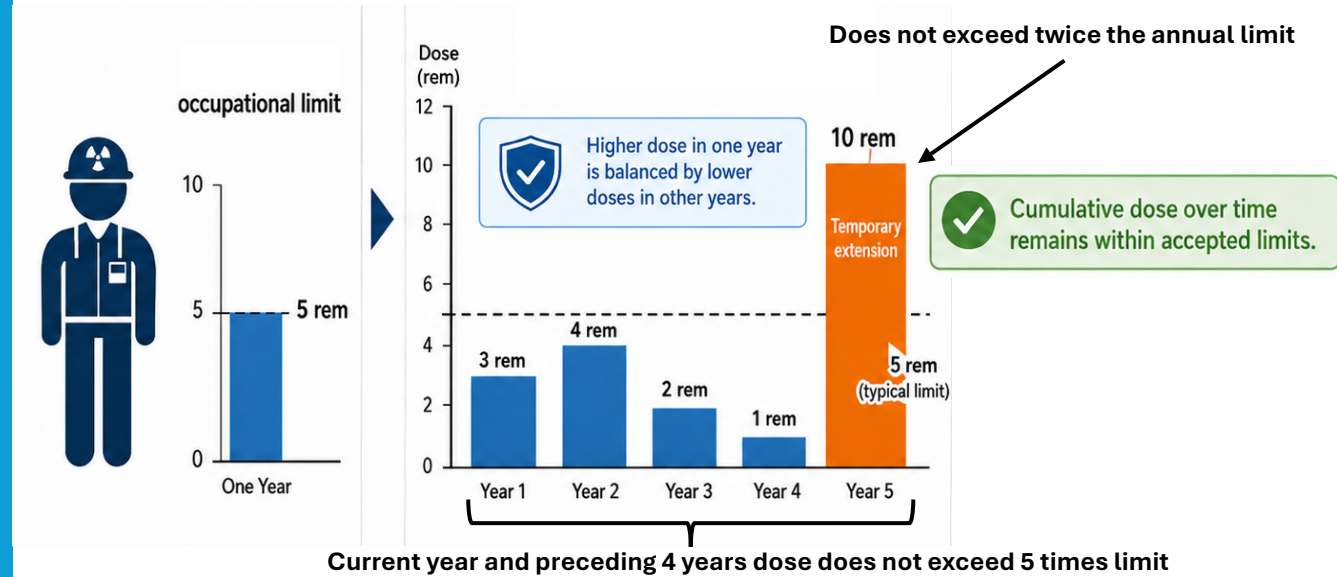
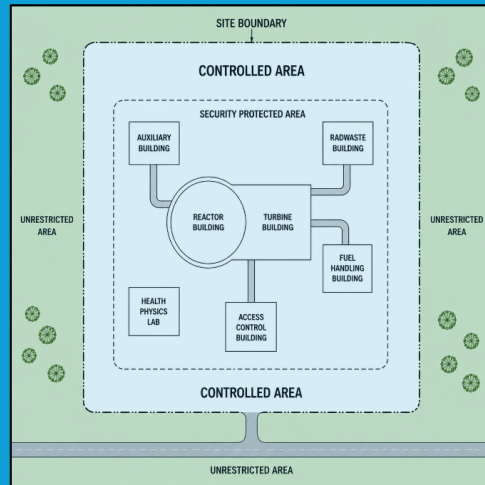
New name for what we already require, but not a new requirement

Dose Limits – Proposed Rule Introduces Flexibilities

Fundamental Occupational and Public Dose Limits are Not Changing

Occupational – Planned occupational dose limit extension (DLE) allows doubling in the annual dose provided 5-year average is maintained within limits (analogous to planned special exposure)

Public* – Case-by-case process for increases in limit in the controlled area and the unrestricted area



*2 mrem in any hour provision of the public dose limit is proposed for deletion

Protection of Caregivers

Proposed Rule Changes:

- **Introduce and Define “Caregiver” concept**
- **Allow caregivers to receive up to 2 rem per administration regimen from patients in cases where they are visiting/caring for a patient in a facility**
- **Allow caregivers to receive up to 5 rem per administration regimen from patients following release from a facility**
- **Dose limits for non-caregivers are 500 mrem per administration regimen**

Effluent Reform

Proposed Rule Changes:

- **Increase in design objective/standard technical specification value to 25 mrem/year TEDE (or TED)**
- **Allow cost-benefit analysis using NUREG-1530, Revision 1**
- **Require annual reports for licensees that exceed 25 mrem/year**

Administrative Improvements

Proposed Rule Changes:

- Dosimetry Methods - Enable use of modern dosimetry methods and models
- Respiratory Protection - Permits licensees to use NRC-approved respiratory devices and higher assigned protection factors, provided that existing NRC safety evaluations apply.
- Reporting of Monitoring Results - Monitoring criteria do not change; however, actual end of year results do not have to be reported to the NRC if they do not exceed 50 mrem/year. Exception to reporting unplanned exceedances of effective dose limit based on multi-year average being within long-term limit.
- Accident Analysis Acceptance Criteria – Level set acceptance criteria at 10 rem for accident analysis that currently use “well within” and “small fraction of” acceptance criteria.

Submitting Comments

- Comments must be submitted in writing through the methods described in the *Federal Register* notice to receive formal consideration in the rulemaking.
 - Go to <https://www.regulations.gov> and search for Docket ID NRC-2025-1140.
- Note – The NRC included six “Specific Requests for Comments” in Section V of the proposed rule, please consider responding to those requests

Timeline/Dates

- Proposed rule published in the *Federal Register* on July 15, 2026 (91 FR 43456).
 - 47-day public comment period ends on August 31, 2026.
- NRC will consider public comments submitted under Docket ID NRC-2025-1140.
- Estimated date to publish final rule in the *Federal Register*: December 2026 ([NRC Planned Rulemaking Activities](#))

Questions?



Participation Guidelines

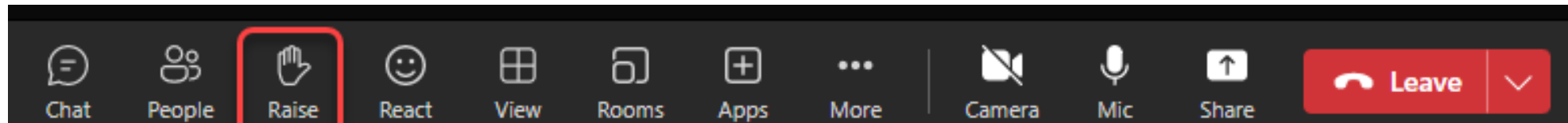


- ☐ Hoping to hear from as many participants as possible
- ☐ Listen-only mode unless acknowledged to speak
- ☐ Maintain a cordial and professional environment
- ☐ No regulatory decisions will be made

Virtual Participation



- 1) Raise your virtual hand to indicate your desire to be recognized
 - Teams: Use the “Raise my Hand” button
 - Phone: Press “*5”

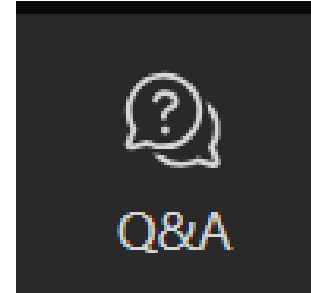


- 2) Wait for the facilitator to acknowledge your turn to speak
- 3) Unmute yourself
 - Teams: Use the “unmute/mic” button
 - Phone: Press “*6”



Virtual Participation Alternative

- 1) Provide questions using the “Q&A” feature:



- 2) We will get to as many questions as we are able
- 3) Because of limitations involving Teams, certain participants may only be able to provide their questions using the Q&A feature. We apologize for this unavoidable limitation.

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Date/Time	Purpose	Location	Contact
* Date/Time Change *	Meeting info The purpose of the meeting is to follow-up discussions	Webinar NA	John G. Lamb (301) 415-3100

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Closing Remarks

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- Proposed Rule published on July 15, 2026 (91 FR 43456).
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Thank you for joining us today