



# United States Consumer Product Safety Commission

August 26th, 2026

## Annual Gold Standard Science (GSS) Report

September 1, 2026

### Executive Summary

This report<sup>1</sup> provides CPSC's annual update on implementation of the Gold Standard Science (GSS) guidance under [Executive Order 14303](#). It summarizes progress across the nine scientific integrity tenets, adoption of AI-enabled integrity tools, staff training, and challenges encountered in FY 2026. The report is prepared for submission to the Office of Science and Technology Policy (OSTP) and for publication on the agency's Gold Standard Science webpage (<https://cpsc.gov/GSS>).

### 1. Introduction & Context

The U.S. Consumer Product Safety Commission (CPSC) has implemented the Office of Science and Technology Policy (OSTP) Gold Standard Science (GSS) guidance as an integral component of the agency's scientific integrity program. GSS provides a framework for strengthening the quality, transparency, reproducibility, and credibility of scientific information used by Federal agencies. Implementation of GSS is directly tied to CPSC's mission, because scientific and technical work provides the foundation for identifying consumer product hazards, evaluating risks, conducting exposure and engineering assessments, and informing regulatory and other agency actions.

CPSC is implementing the nine scientific tenets presented in the GSS guidance, which describes how scientific research is conducted in a manner that is: Reproducible; Transparent; Communicative of Error and Uncertainty; Collaborative and Interdisciplinary; Skeptical of Findings; Structured for Falsifiability; Unbiased Peer Review; Acceptance of Negative Results; and Free from Conflicts of Interest. The implementation approach recognizes that CPSC's scientific activities are predominantly mission-driven, fit-for-purpose applied analyses rather than uniformly hypothesis-driven research. Accordingly, CPSC is developing and applying GSS practices in ways that are appropriate to regulatory science while maintaining rigorous standards for the scientific information used to support the agency's mission.

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<sup>1</sup> This report was prepared by CPSC staff. It has not been reviewed or approved by, and may not represent the views of, the Commission.



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Progress this year reflects ongoing integration of transparency, reproducibility, uncertainty communication, and conflict-of-interest safeguards into clearance processes and research workflows. A two-month government lapse in appropriations early in the FY 2026 fiscal year constrained staff availability and slowed some GSS implementation tasks, including data archiving, preregistration pilots, and rollout of updated guidance. However, following the lapse in appropriation, GSS implementation tasks resumed with prioritized focus on core scientific integrity deliverables.

## **2. Addressing Each Gold Standard Science Tenet (2026 Progress)**

CPSC's scientific activities are predominantly fit-for-purpose applied analyses conducted to support hazard identification, engineering evaluation, exposure assessment, regulatory decision-making, and public education. Because these activities do not generally involve hypothesis-driven research structures, CPSC's Scientific Integrity Committee (SIC) has tailored GSS evaluation methods to reflect the realities of mission-driven regulatory science. The nine tenets of GSS adopted by CPSC are intended to ensure that scientific rigor and integrity is applied across diverse applied workflows, while supporting CPSC's mission to protect the public from unreasonable risks of injury associated with consumer products.

During FY 2026, CPSC worked on implementing the following GSS tenets of scientific integrity:

- **Reproducible — Complete methods documentation and archiving:** CPSC has expanded project-level documentation and archiving requirements and piloted automated protocol-completeness checks. These activities strengthen the ability to understand, evaluate, and reproduce scientific and technical work that supports the agency's public safety mission.
- **Transparent — Data and code available in open formats:** CPSC has incorporated uniform data- and code-sharing standards into clearance processes and increased posting of datasets in open formats. These practices support transparency and public confidence by making scientific information relied upon by the agency more accessible, to the extent practicable and allowed by law.
- **Communicative of Error and Uncertainty — Uncertainty information included in scientific reporting:** CPSC has trained staff on uncertainty quantification and



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developed a draft standard operating procedure (SOP) for reporting error margins. Communicating uncertainty helps decision-makers understand the strengths and limitations of scientific evidence and supports CPSC's responsibility to present the best available information objectively when science is used to inform consumer product safety decisions.

- **Collaborative and Interdisciplinary — Cross-directorate scientific collaboration:** CPSC has established interdisciplinary coordination groups and expanded the use of digital workspaces for joint reviews. This strengthens the integration of scientific and technical perspectives across the agency and supports more comprehensive consideration of the evidence used in mission-driven consumer product safety decisions.
- **Skeptical of Findings — Replication and critical evaluation:** CPSC has drafted a process for adversarial collaboration and replication studies and completed initial replication reviews. These activities strengthen critical evaluation of scientific findings and help ensure that information used in CPSC's mission is subjected to appropriate scrutiny rather than accepted without examination.
- **Structured for Falsifiability — Accessible underlying information and preregistration:** CPSC has drafted an internal preregistration framework also known internally as a test plan for research protocols and incorporated progress toward making underlying information accessible. These practices improve the ability to define research expectations in advance, evaluate whether conclusions are supported by the evidence, and identify circumstances in which findings may not be supported. This strengthens the evidentiary foundation for CPSC's scientific and regulatory work.
- **Unbiased Peer Review — Independent scientific review:** CPSC has standardized peer-review templates and initiated a feasibility study of double-blind review for all documents slated for release. Additionally, CPSC's Scientific Integrity Policy calls for scientific data and research supporting policy decisions to undergo review by qualified experts where feasible and appropriate and requires conflict-of-interest review for independent contractor peer reviewers.
- **Acceptance of Negative Results — Documentation and archiving of null or negative findings:** CPSC has created an internal channel for null and negative



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findings and completed initial postings. Maintaining these findings supports a more complete scientific record and reduces the risk that decision-makers or future analysts will see only findings that support a particular conclusion.

- **Free from Conflicts of Interest — Disclosure and review of potential conflicts:** CPSC has maintained rigorous conflict-of-interest screening and achieved full agency-wide completion of the Annual Conflict-of-Interest Disclosure & Review attestation. The agency also began planning an AI-enabled cross-check pilot.

Taken together, these activities are being institutionalized through CPSC's scientific and technical documentation, SOPs, review and clearance processes, and associated records, which provide a basis for retaining and revisiting methods, critiques, independent reviews, replication efforts, and supporting evidence. These documents help ensure that the application of the GSS tenets is traceable over time and can be reviewed by the Scientific Integrity Committee to monitor implementation, identify areas for improvement, and strengthen the reliability and transparency of scientific information used to protect consumers.

The Scientific Integrity Committee will continue to refine the tenets so that they remain meaningful, practical, and aligned with CPSC's scientific integrity responsibilities and mission.

### 3. Use of AI-Enabled Tools (2026 Update)

CPSC evaluated and piloted several AI-based tools to reduce administrative burden and strengthen scientific integrity workflows.

| Tool              | Purpose                                      | 2026 Pilot Status          | Planned 2027 Actions                                  |
|-------------------|----------------------------------------------|----------------------------|-------------------------------------------------------|
| Protocol Verifier | Check completeness of research documentation | Piloted on select projects | Scale to more divisions; integrate into clearance SOP |



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| <b>Tool</b>                      | <b>Purpose</b>                                        | <b>2026 Pilot Status</b>       | <b>Planned 2027 Actions</b>                      |
|----------------------------------|-------------------------------------------------------|--------------------------------|--------------------------------------------------|
| Bias Scanner                     | Screen peer-review packets for inconsistency          | Pilot evaluation               | Decide adoption; tune thresholds with SIC        |
| Uncertainty Analyzer             | Support insertion of confidence intervals/assumptions | Pilot in engineering workflows | Expand to epidemiology/toxicology                |
| Text Integrity Check             | Detect overstated claims or omitted limitations       | Proof-of-concept               | Refine rules; add reviewer prompts               |
| Conflict of Interest Cross-Check | Compare disclosures with public records               | Design phase                   | Develop pilot under privacy/cybersecurity review |

#### **4. Training & Capacity Building**

CPSC has continued to strengthen GSS-aligned training and capacity-building efforts across the agency in FY 2026. Core scientific integrity training remained a foundational requirement, and all CPSC scientific and technical staff completed the biennial GSS Fundamentals & Tenets module in FY 2025.

Several training modules were delivered in pilot form to select staff as part of ongoing efforts to expand scientific integrity practices. The Uncertainty Communication module introduced analysts and engineers to emerging CPSC visual reporting standards and reinforced approaches for documenting error margins. Staff participation was strong, and formal completion metrics will be established once the module moves from pilot to full deployment.

CPSC also advanced training on protocol preregistration (test plan), offering guided pilot sessions for researchers and project leads as part of the agency's phased rollout of preregistration practices. Likewise, the Open Data & Code Sharing LMS module provided foundational instruction on repository use, data-sharing checklists, and approaches for meeting transparency expectations as uniform standards continue to evolve.



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Because several modules remained in pilot or developmental stages during FY 2026, full quantitative participation metrics are not yet available. The Scientific Integrity Committee is tracking module adoption and will incorporate formal metrics as these trainings are finalized and transition to standardized, agency-wide requirements. Scientific integrity training materials and documents will be maintained electronically in a centralized location accessible agency-wide for reference. Materials will be updated as needed to reflect changes to applicable policies, procedures, and SOPs, with current versions made available to staff. Taken together, CPSC's training efforts reflect steady progress in building staff capability, expanding integrity-aligned practices, and preparing the agency for broader implementation of Gold Standard Science frameworks.

## 5. Challenges Encountered (2026)

CPSC has encountered some challenges in FY 2026. A two-month lapse in appropriations early in FY 2026 slowed data archiving, preregistration pilots, and guidance rollout. Staffing fluctuations throughout the year affected timeline adherence for dashboard updates and SOP finalization. CPSC continues to work on streamlining reporting to minimize administrative burden while still maintaining scientific and technical rigor.

## 6. Reporting, Publication & Continuous Improvement

This report will be submitted to OSTP and posted to the public CPSC GSS page (<https://cpsc.gov/GSS>). SIC will continue iterative improvements to metrics collection, dashboards, and SOPs and will report progress in FY 2027.

## 7. Conclusion

CPSC remains committed to rigorous, transparent, and reproducible science that adheres to the principles outlined by OSTP in their Gold Standard Science guidance. Actions planned for FY 2027 prioritize scaling preregistration, deepening interdisciplinary collaboration, and operationalizing AI-supported integrity tools.