A Message from the IRIS Program
October 2021

The IRIS Program is committed to producing assessments in a timely and transparent manner. Table 1 describes assessments that are currently in development and their projected deliverable dates. The IRIS Program is providing this information so that stakeholders are aware of upcoming assessment products, and to allow the public and research community an opportunity to communicate relevant research to EPA.

Projected dates are based on factors such as the size of a chemical's evidence base and staff availability. Nearer-term activities are estimated using current Fiscal Year (FY) and Quarter. Long-term milestones are projected only for the FY due to increased uncertainty. While projected dates reflect the IRIS Program's best estimate based on available information, they are subject to change. Changes to estimated dates typically result from additional time needed to address new data or respond to internal, public, and/or peer review comments on the scientific challenges unique to each chemical assessment, in addition to the availability of staff with the appropriate expertise to address those challenges. The IRIS Program Outlook will be updated at least three times each calendar year (February, June, October).

Additional information regarding other pertinent products and activities is included in Tables 2 and 3.

Table 1. IRIS Assessment Products – October 2021

Assessment	Public Product(s)	Projected Deliverable Date
Arsenic, Inorganic	Systematic Review Protocol	Released on May 28, 2019. NAS review meeting July 16, 2019
	Public Comment Draft	FY22 Q4
	External Peer Review	FY23
Chloroform (Inhalation)	IRIS Assessment Plan	Released on September 18, 2017. Public Science Meeting on September 27, 2017
	Systematic Review Protocol	Released on January 31, 2018
	Public Comment Draft	FY22 Q4
	External Peer Review	FY23
Chromium VI	Systematic Review Protocol	Released on March 15, 2019. Public Science Meeting on April 24, 2019
	Public Comment Draft	FY22 Q4
	External Peer Review	FY23
Ethylbenzene	IRIS Assessment Plan	Released on September 18, 2017
	Systematic Review Protocol	FY22 Q2
	Public Comment Draft	TBD
	External Peer Review	TBD
Formaldehyde	Public Comment Draft	FY22 Q2
	External Peer Review	FY22 Q2
Inorganic Mercury salts	IRIS Assessment Plan	Released on October 8, 2019. Public Science Meeting on December 5, 2019
	Systematic Review Protocol	Released on March 11, 2021
	Public Comment Draft	FY23
	External Peer Review	FY23

Assessment	Public Product(s)	Projected Deliverable Date
Methylmercury	IRIS Assessment Plan	Released on April 4, 2019. Public Science Meeting on May 15, 2019
	Systematic Review Protocol	Released on May 26, 2020
	Public Comment Draft	FY23
	External Peer Review	FY24
Naphthalene	IRIS Assessment Plan	Released on July 5, 2018. Public Science Meeting on November 9, 2021
	Systematic Review Protocol	FY22 Q3
	Public Comment Draft	TBD
	External Peer Review	TBD
Perfluorobutyrate (PFBA)[1]	Systematic Review Protocol	Released on November 8, 2019
	Public Comment Draft	Released on August 18, 2021
	External Peer Review	FY22 Q1
Perfluorodecanoate (PFDA)[1]	Systematic Review Protocol	Released on November 8, 2019
	Public Comment Draft	FY22 Q4
	External Peer Review	FY22 Q4
Perfluorohexanoic acid (PFHxA)[1]	Systematic Review Protocol	Released on November 8, 2019
	Public Comment Draft	FY22 Q2
	External Peer Review	FY22 Q2
Perfluorohexane Sulfonic Acid (PFHxS)[1]	Systematic Review Protocol	Released on November 8, 2019
	Public Comment Draft	FY22 Q4
	External Peer Review	FY22 Q4
Perfluorononanoate (PFNA)[1]	Systematic Review Protocol	Released on November 8, 2019

Assessment	Public Product(s)	Projected Deliverable Date
	Public Comment Draft	FY22 Q4
	External Peer Review	FY22 Q4
Polychlorinated Biphenyls (PCBs; noncancer)	Systematic Review Protocol	Released on December 19, 2019
	Public Comment Draft	FY24
	External Peer Review	FY24
Uranium	IRIS Assessment Plan	Released on January 31, 2018. Public Science Meeting on March 22, 2018
	Systematic Review Protocol	FY22 Q3
	Public Comment Draft	TBD
	External Peer Review	TBD
Vanadium and Compounds (Oral)	IRIS Assessment Plan	Released on July 24, 2020. Public Science Meeting on August 19, 2020
	Systematic Review Protocol	Released on April 26, 2021
	Public Comment Draft	FY23
	External Peer Review	FY23
Vanadium and Compounds (Inhalation)	IRIS Assessment Plan	Released on May 28, 2021. Public Science Meeting on July 14, 2021.
	Systematic Review Protocol	FY22 Q2
	Public Comment Draft	FY23
	External Peer Review	FY24

[1]Per- and polyfluoroalkyl Substances (PFAS) assessments under development are in support of EPA's 2019 PFAS Action Plan, located at https://www.epa.gov/pfas/previous-actions-address-pfas and the recently released EPA 2021 Strategic Roadmap, located at https://www.epa.gov/pfas/pfas-strategic-roadmap-epas-commitments-action-2021-2024. The release of the draft PFBA assessment for public comment addresses a Priority Action in EPA's 2019 PFAS Action Plan, while the ongoing development of the PFHxA, PFHxS, PFNA, and PFDA draft assessments are identified as a Key Action in the EPA 2021 Strategic Roadmap.

Table 2. Upcoming IRIS Non-Assessment Products and Activities

Product or Activity	Next Anticipated Public Step(s)	Projected Deliverable Date
ORD Staff Handbook for Developing IRIS Assessments ("IRIS Handbook")	Final	FY22
NAS Workshop - Advances Made During Application of Artificial Intelligence and Open Data Practices in Chemical Hazard Assessment	Public Workshop	FY22 Q2
NAS Workshop - Triangulation of Evidence in Environmental Epidemiology	Public Workshop	FY22 Q1
PCB Mixtures/Modeling and Tool	Public Meeting	FY22 Q2

Table 3. Select Publications Related to IRIS Assessment Activities

Assessment	Citation	Publication Date
Polychlorinated Biphenyls (PCBs; noncancer)	Weitekamp, C.A., Phillips, L.J., Carlson, L.M., DeLuca, N.M., Cohen Hubal, E.A., Lehmann, G.M. (2021). A state-of-the-science review of polychlorinated biphenyl exposures at background levels: Relative contributions of exposure routes, Science of the Total Environment, 776(1). 145912. https://doi.org/10.1016/j.scitotenv.2021.145912	Published February 2021
Polychlorinated Biphenyls (PCBs; noncancer)	Christensen, K., Carlson, L.M., Lehmann, G.M. (2020). The role of epidemiology studies in human health risk assessment of polychlorinated biphenyls. Environmental Research, 194, 110662. https://doi.org/10.1016/j.envres.2020.110662	Published December 2020
Inorganic Arsenic	Allen, B., Shao, K., Hobbie, K., Mendez Jr., W., Lee, J.S., Cote, I., Druwe, I.L., Gift, J.S., Davis, J.A. (2020). Bayesian hierarchical dose-response meta-analysis of epidemiological studies: Modeling and target population prediction methods. Environment International, 145, 106111. https://doi.org/10.1016/j.envint.2020.106111	Published December 2020
Inorganic Arsenic	Hobbie, K., Shao, K., Henning, C., Mendez Jr., W., Lee, J.S., Cote, I., Druwe, I.L., Davis, J.A., Gift, J.S. (2020). Use of study-specific MOE-like estimates to prioritize health effects from chemical exposure for analysis in human health assessments. Environment International, 144, 105986. https://doi.org/10.1016/j.envint.2020.105986	Published November 2020

Assessment	Citation	Publication Date
Inorganic Arsenic	Mendez Jr., W., Shao, K., Lee, J.S., Cote, I., Druwe, I.L., Davis, J.A., Gift, J.S. (2020). Model averaging methods for the evaluation of dose-response model uncertainty when assessing the suitability of studies for estimating risk. Environment International, 143, 105857. https://doi.org/10.1016/j.envint.2020.105857	Published October 2020
Inorganic Arsenic	Allen, B., Shao, K., Hobbie, K., Mendez Jr., W., Lee, J.S., Cote, I., Druwe, I.L., Gift, J.S., Davis, J.A. (2020). Systematic dose-response of environmental epidemiologic studies; Dose and Response pre-analysis. Environment International, 142, 105810. https://doi.org/10.1016/j.envint.2020.105810	Published September 2020
Methylmercury	Wells, E.M. Kopylev, L., Nachman, R. Radke, E.G., Segal, D. (2020). Seafood, wine, rice, vegetables and other food items associated with mercury biomarkers among seafood and non-seafood consumers: NHANES 2011-2012. Journal of Exposure Science and Environmental Epidemiology, 30(3). 10.1038/s41370-020-0206-6	Published February 3, 2020