U.S. Environmental Protection Agency
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1200 Pennsylvania Avenue NW
Washington, DC 20460

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RE: Docket ID Number EPA-HQ-OW-2023-0469; recommendation to add mifepristone and its active metabolites to the Sixth Unregulated Contaminant Monitoring Rule (UCMR 6) for Public Water Systems

To whom it may concern at the U.S. Environmental Protection Agency Docket Center, Liberty Counsel Action submits the following comment in response to the Environmental Protection Agency's request for comments outlined in the Federal Register published on July 1, 2026, under "Revisions To Establish the Sixth Unregulated Contaminant Monitoring Rule (UCMR 6) for Public Water Systems."[1]

Executive Summary

As use of the chemical abortion drugs mifepristone and misoprostol has increased, so too has the contamination of our water, threatening the Environmental Protection Agency's (EPA) mandate to safeguard one of our nation's most precious resources. This contamination occurs in two forms:

1. From the chemical compounds of mifepristone, which is the only drug on the market designed and approved by the Food and Drug Administration (FDA) to be lethal in purpose (end fetal life).
    - After use, mifepristone forms three active metabolites in the body. Once excreted (via feces, urine, and the human fetal remains/medical waste generated by the pill), these chemical compounds, referred to hereafter as mifepristone's active metabolites, retain the ability of the parent drug to block the vital fertility hormone progesterone, rendering them endocrine disruptors.[2]

[1] USEPA, "Revisions To Establish the Sixth Unregulated Contaminant Monitoring Rule (UCMR 6) for Public Water Systems," Federal Register, Vol. 91, No. 125. P. 39952, July 1, 2026, https://www.federalregister.gov/documents/2026/07/01/2026-13263/revisions-to-establish-the-sixth-unregulated-contaminant-monitoring-rule-ucmr-6-for-public-water.

[2] N. N. Sarkar, "Mifepristone: bioavailability, pharmacokinetics and use-effectiveness," *European Journal of Obstetrics, Gynecology, and Reproductive Biology*, Vol. 101, No. 2, March 10, 2002, https://www.ejog.org/article/S0301-2115(01)00522-X/fulltext. Specifically, this article states: "Three metabolites of mifepristone have been identified. This compound undergoes demethylation to produce mono-demethylated (RU42633) and di-demethylated (RU42848) derivatives as well as hydroxylation of the propynyl group to yield hydroxylated metabolite (RU42698) . . . Like mifepristone, these metabolites are immunologically and biologically active and retain

- The majority of the over one million abortions that occur annually are chemical abortions, meaning, based on a conservative estimate, that every year approximately 700,000 women excrete active abortion pill contaminants into our wastewater systems.[3]
- As acknowledged by the EPA, neither traditional wastewater nor traditional drinking treatment plants are fully equipped to remove all pharmaceuticals (like mifepristone).[4]
- Mifepristone has a long half-life, is slow to biodegrade, and persists in the environment as it is constantly being replenished.[5]

Corroborating these facts, a peer-reviewed study published July 20, 2026, "Anti-Progesterone in Environmental Water," reports finding "significant levels of mifepristone" in eight out of nine water sampling groups from three U.S. cities, including two municipal tap water samples (in Carbondale, Illinois, and Austin, Texas).[6] [7] These results follow a trend, as mifepristone has been detected internationally in wastewaters,[8] and also verify what Liberty

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anti-progestational and anti-glucocorticoid properties. Elimination of mifepristone and its active metabolites from the body is mainly through feces (83%) and urine (8.8%) within 6–7 days after administration of a single oral dose." See also: Endocrine Disruptors and Your Health," National Institute of Environmental Health Sciences, March 2023, https://www.niehs.nih.gov/sites/default/files/health/materials/endocrine_disruptors_508.pdf.

[3] Isaac Maddow-Zimet, Rachel K. Jones and Emma Stoskopf-Ehrlich, "Abortion in the United States," Guttmacher Institute, March 2026, https://www.guttmacher.org/fact-sheet/induced-abortion-united-states. See also, Guttmacher Institute, "Monthly Abortion Provision Study," accessed August 7, 2026, https://www.guttmacher.org/monthly-abortion-provision-study. As shown by the data, 65% of the 1,058,820 clinician-provided abortions in 2023 were chemical (pill) abortions. However, non-U.S. clinician abortions are not included, hence this number is likely much higher, given women's access to mifepristone from online providers outside the U.S., the lack of reporting requirements related to chemical abortion, and the upward trend in usage. See: "U.S. chemical abortions as a result of telehealth rise by 25%, report finds," U.S. Senator Cindy Hyde-Smith, March 27, 2026, https://www.hydesmith.senate.gov/us-chemical-abortions-result-telehealth-rise-25-report-finds.

[4] "How Pharmaceuticals Enter the Environment," United States Environmental Protection Agency, Last modified January 22, 2026, https://www.epa.gov/household-medication-disposal/how-pharmaceuticals-enter-environment; "Primer for Municipal Wastewater Treatment Systems," United States Environmental Protection Agency, September 2004, https://www.epa.gov/sites/default/files/2015-09/documents/primer.pdf; "Human Health Benchmarks for Pharmaceuticals in Drinking Water," U.S. Environmental Protection Agency, Office of Water, March 2026, https://www.epa.gov/system/files/documents/2026-03/human-health-benchmarks-for-pharmaceuticals-2026-technical-document.pdf.

[5] See section below, "Mifepristone Has a Long Half-Life, is (Likely) Pseudo-Persistent, & Has Potential to Bioaccumulate."

[6] Elise Rose and Michael Varveris, "Anti-Progesterone in Environmental Water," *Issues in Law and Medicine | A Journal of the Alliance for Hippocratic Medicine,* Vol. 41, No. 1, July 20, 2026, https://issuesinlawandmedicine.com/articles/anti-progesterone-in-environmental-water/.

[7] Note: Criticism of this study was recently published in a Politico article; for our response to said critiques, see Point 1 in Appendix 1*: Supplementary Information to Further Address Opposing Viewpoints*. In short, in the same Politico article, the author of the study explains they contracted with a laboratory that "tested specifically for mifepristone," further stating, "This is a bio assay that's based on enzymes and antibodies are like a lock and key . . . In order for something else to fit in there, it has to be very similar. And mifepristone is not a simple molecule." See: Alice Miranda Ollstein and Ariel Wittenberg, "Activists 'throwing everything' they can against abortion turn to wastewater data," Politico, July 26, 2026, https://www.politico.com/news/2026/07/26/abortion-opponents-new-weapon-wastewater-data-01011537?utm_source=substack&utm_medium=email.

[8] See the subsection titled "Mifepristone's Presence Detected in Other Countries," on p. 42.

Counsel Action and others have long proposed is highly likely: that mifepristone is in our water. This is particularly concerning in drought-prone regions where water reuse is prevalent,[9] even more so in urban areas with high abortion rates. Consider the university town of Austin, Texas, where municipal tap water samples showed mifepristone levels as high as 39 parts per trillion (ppt)[10] with an average level of 16.1 ppt across four samples.[11] In this city (and likely other cities with a similar profile), the concentration of these persistent contaminants is at a level likely warranting regulatory action, particularly when one considers the EPA set the maximum contaminant levels for certain other endocrine disruptors, the long-lasting "forever chemicals" PFOA and PFOS, at 4 ppt,[12] and that this study did not test for active metabolites, meaning contamination from the abortion pill may be higher than these initial findings. Further testing is urgently needed to determine the prevalence of this contaminant nationwide and the risk it poses to human health and the environment.

2. The biological material, specifically the human fetal remains and related medical waste (placenta, umbilical cord, etc.) that is expelled after use of chemical abortion pills, is typically flushed down the toilet as well—arguably in violation of various states' fetal tissue disposal laws and medical waste regulations.[13] Tragically, numerous fetuses have been found in wastewater treatment plants across the country[14] (in some cases, the wastewater

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[9] M. Zemann, M. Majewsky, and L. Wolf, "Accumulation of Pharmaceuticals in Groundwater Under Arid Climate Conditions – Results from Unsaturated Column Experiments," *Chemosphere* Vol 154, July 2016, https://www.sciencedirect.com/science/article/abs/pii/S004565351630460X. This study hypothesized that as evaporation rates in water-scarce and arid regions "are typically high," when water reuse is utilized, persistent substances, namely pharmaceutical residues, "might enrich in the groundwater recharge of closed catchments like the Jordan Valley." It concluded, "*the observed concentrations provide conclusive evidence that a sufficiently persistent pharmaceutical with negligible biodegradation can accumulate in soil water if irrigated under arid conditions. The hypothesis of evaporative enrichment in arid environments therefore can be accepted for the given experiment conditions.*"

[10] Elise Rose and Michael Varveris, "Anti-Progesterone in Environmental Water," *Issues in Law and Medicine*.

[11] Ibid.; Vincent Martorano, "Austin leads the charge in water recycling to combat drought effects," *CBS Austin,* March 12, 2025, https://cbsaustin.com/news/local/austin-leads-the-charge-in-water-recycling-to-combat-drought-effects; Anton Caputo, "Saving Austin's Water," Texas Geosciences | The University of Texas at Austin, https://www.jsg.utexas.edu/news/2022/12/saving-austins-water/.

[12] "Per- and Polyfluoroalkyl Substances (PFAS) | Final PFAS National Primary Drinking Water Regulation," United States Environmental Protection Agency, updated May 18, 2026, https://www.epa.gov/sdwa/and-polyfluoroalkyl-substances-pfas.

[13] Guidance provided by the American Civil Liberties Union (ACLU) at the time on how state abortion restrictions would apply to the abortion pill make it clear that the ACLU (and arguably the abortion providers they wrote to) understood that certain states may not permit flushing "products of conception." See: "Do Existing State Abortion Laws Apply to Mifepristone (RU-486)?" ACLU, February 21, 2000, https://www.aclu.org/documents/do-existing-state-abortion-laws-apply-mifepristone-ru-486. For example, Florida's regulations do not permit flushing abortion by-products; for details on this, see the section entitled "Case Study: Florida" in Liberty Counsel Action's white paper, "Abortion in Our Water," 2025, available at https://lcaction.org/LCA-PDFs/AbortionInOurWater_Final01.pdf.

[14] There are numerous other examples of wastewater treatment plants discovering babies in their systems; for example, just this year a baby boy estimated to be between 13 and 15 weeks was "taken to the Medical University of South Carolina for further examination" after being found at a wastewater treatment facility in Sumter County; see Dejon Johnson, "Coroner releases autopsy details on fetus found at water plant," ABC4 News, February 16, 2026,

treatment workers who encounter them have been offered counseling services[15]). Similar cases have emerged in recent years of fetuses clogging pipes and leading to sewer backflows,[16] which is to be expected when one considers:

- Fetuses do not break down like other types of toilet waste (toilet paper and feces).
- Fetuses at later gestations are large enough to clog pipes; for example, at the FDA-approved gestational limit of ten weeks, a fetus can be upwards of 1 inch in size,[17] and at just two weeks later the fetus doubles in size to upwards of 2 inches, and so on.
- There is no gestational age verification requirement tied to obtaining abortion pills, meaning a human fetus may be aborted with mifepristone (outside of a clinical setting, commonly at home) at any gestation (*underscoring this point, eight online abortion providers have recently been found to mail abortion drugs into states where their use is illegal at any gestation, with some advertising use of the pills is acceptable up to 14 weeks, well beyond the FDA approved 10-week limit*[18]).[19]

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https://abcnews4.com/news/local/coroner-releases-autopsy-details-on-fetus-found-at-water-plant-sumter-county-edgehill-road-south-carolina-sled. For more examples see: WKRC, "Fetus discovered at Ohio waste water treatment facility," ABC45 News, April 17, 2026, https://abc45.com/news/nation-world/fetus-discovered-at-ohio-waste-water-treatment-facility-health-care-facilities-investigation-launched-wastewater-cincinnati-law-enforcement-miscarriage-suspected-pregnancy-unborn-remains-loss-official; "2 fetuses found at wastewater treatment plant," The Associated Press, August 16, 2016, https://apnews.com/article/16fb077a579d483da1343bd547bb9f33; "Fetus found in sewage at wastewater plant," The Associated Press, May 31, 2022, https://apnews.com/article/mississippi-wastewater-natchez-8021c8d89b77a8f82716ec3b2d8b78e1; "Remains of fetus found at wastewater treatment plant in southern California," Dailymail.com, April 7, 2019, https://www.dailymail.com/news/article-6896445/Remains-fetus-wastewater-treatment-plant-southern-California.html; Mario Diaz, "Fetus found at Newark sewage treatment facility for second time this month," Pix 11, March 22, 2017, https://pix11.com/news/fetus-found-at-newark-sewage-treatment-facility-for-second-time-this-month/. While it is important to note that most cases fail to verify whether the babies found are the result of an abortion or miscarriage, the underlying point remains: The Food and Drug Administration's overly permissive abortion drug regulations fail to ensure a woman's gestation is verified prior to issuing abortion pills, meaning that while on paper the FDA has only approved chemical abortion through 10 weeks, women are able to obtain these pills online at *any* gestation, and have been known to. Indeed, certain websites even advertise the pills can be used up to 12 weeks, and while some states have laws prohibiting their use at various gestations, at least eight websites will ship pills into such states.

[15] Jessica Schmidt, "Human fetus discovered inside Cincinnati wastewater treatment plant," Fox19 Now, February 14, 2017, https://www.fox19.com/story/34495350/human-fetus-discovered-inside-cincinnati-wastewater-treatment-plant/.

[16] Alejandra Yañez, "Update: Tenant finds fetus while working on apartment plumbing in Mission," ValleyCentral, February 1, 2023, https://www.valleycentral.com/news/local-news/plumber-finds-fetus-in-mission-pipes-sources-say/; Nathaniel Rodriguez, "Plumber finds fetus in apartment pipe while fixing clog: reports," WFLA, September 12, 2023, https://www.wfla.com/news/national/plumber-finds-fetus-in-apartment-pipe-while-fixing-clog-reports/.

[17] Karen Miles, "How fast is your baby growing? See how fetal weight and height change by week during pregnancy," Baby Center, May 30, 2025, https://www.babycenter.com/pregnancy/your-body/growth-chart-fetallength-and-weight-week-by-week_1290794; "Measurements of the fetus at 10 weeks of pregnancy," Invitra, September 28, 2023, https://www.invitra.com/en/10- weeks-pregnant/foetus-week-10-strawberry/; "Better Health | Start For Life, Week 10," National Health Service, accessed June 2, 2025, https://www.nhs.uk/start-for-life/pregnancy/week-by-week-guide-to-pregnancy/1st-trimester/week-10/.

[18] Mia Steupert, "An Overview of Online Abortion Drug Access in Post-Dobbs America," Charlotte Lozier Institute, May 26, 2026, https://lozierinstitute.org/an-overview-of-online-abortion-drug-access-in-post-dobbs-america/.

[19] This form of environmental harm is also addressed in Liberty Counsel Action's "Memorandum for the Environmental Protection Agency Office of Water," Liberty Counsel Action, Fall 2025, https://abortioninourwater.org/PDFs/LCA/MemorandumtoEPAre-MifepristoneRegulations2026.pdf.

Furthermore, when one considers the approximately 700,000 chemical abortions occurring annually alongside the estimated 23,000-75,000 annual sanitary system overflows (SSOs)[20] and annual combined sewer overflow (CSO) discharges of approximately 425 billion gallons,[21] it is highly probable that the human remains and medical waste from at-home chemical abortions are contaminating American water bodies.[22] [23]

In short, the chemical and biological contamination risk resulting from widespread use of the chemical abortion drug protocol is clear, and as mifepristone's primary action is to block progesterone, a vital fertility hormone for men[24] and women[25] (in pregnant women, this causes fetal demise), there is a critical concern that Americans are ingesting trace amounts of chemicals designed to inhibit fertility. As there is a clear correlation between increased use of the abortion pill, mifepristone,[26] and increased infertility rates,[27] this is all the more troubling. While correlation does not necessarily equate to causation, by no means should a lack of data lead to the conclusion that no harm is occurring. What one should logically conclude is that further study is needed, a very common conclusion in scientific inquiry. Indeed: To know whether mifepristone and its active metabolites in our water and causing harm to human health we need to know: at what levels is it contaminating our water? Who has been exposed? Do the populations in areas with higher concentrations have higher rates of infertility or other reproductive issues? Data obtained by the UCMR 6 can assist in answering these questions.

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[20] The EPA estimated that between 23,000 - 75,000 sanitary system overflows occur annually, "not including sewage backups into buildings." See: "Sanitary Sewer Overflows (SSOs)," The U.S. Environmental Protection Agency, updated April 13, 2026, https://www.epa.gov/npdes/sanitary-sewer-overflows-ssos.

[21] "Clean Water Act: EPA Should Track Control of Combined Sewer Overflows and Water Quality Improvements," U.S. Government Accountability Office, January 25, 2023, https://www.gao.gov/products/gao-23-105285; "Combined Sewer Overflow Program Progress," U.S. Environmental Protection Agency, update August 28, 2025, https://www.epa.gov/npdes/combined-sewer-overflow-program-progress.

[22] For example, in January 2026, over "250 million gallons of sewage entered the Potomac River near Washington. The event was one of the worst incidents of its kind in U.S. history." Further, as a director of digital water solutions summarized, "Wastewater treatment systems are meant to act as a barrier to disease both for public health and environment . . . If you have overflows or failures, these events can release pathogens into waterways and increase the risk of gastrointestinal illnesses, skin infections, and contamination of recreational or drinking waters." Autumn Spredemann, "America's Half-Trillion-Dollar Sewage Problem," The Epoch Times, March 31, 2026, https://www.theepochtimes.com/article/americas-half-a-trillion-dollar-sewage-problem-6002354.

[23] For more information on this topic, please see "Stemming the Tide of Chemical Abortions Contaminating Our Water," Liberty Counsel Action, 2025, https://lcaction.org/LCAPDFs/StemmingtheTideofChemicalAbortionsContaminatingOurWater.pdf.

[24] "Progesterone Therapy: Why Men Need This Vital Hormone Too!" Your Wellness Center, accessed January 22, 2026, https://yourwellnesscenter.com/blog/progesterone-therapy-why-men-need-this-vital-hormone-too/.

[25] "Progesterone and Pregnancy: A Vital Connection," RESOLVE: The National Infertility Association, accessed January 22, 2026, https://resolve.org/learn/infertility-101/female-reproductive-system/progesterone-and-pregnancy/.

[26] Isaac Maddow-Zimet, Rachel K. Jones and Emma Stoskopf-Ehrlich, "Abortion in the United States," Guttmacher Institute.

[27] Brady E. Hamilton, Michelle J.K. Osterman, and Elizabeth C.W. Gregory, "Births: Provisional Data for 2025," National Vital Statistics System | Vital Statistics Rapid Release, No. 43, April 2026, https://www.cdc.gov/nchs/data/vsrr/vsrr043.pdf; U.S. Centers for Disease Control and Prevention, "Infertility: Frequently Asked Questions," May 15, 2024, https://www.cdc.gov/reproductive-health/infertility-faq/index.html#cdc_generic_section_2-is-infertility-a-common-problem.

Given the nation's ongoing fertility crisis,[28] as well as the general growing concern of the health risks posed by endocrine disruptors in our water, the potential adverse impact of mifepristone and its active metabolites on public health warrant immediate monitoring efforts. As such, Liberty Counsel Action recommends that **mifepristone, a substituted 19-nor steroid compound chemically designated as 11ß-[p-(Dimethylamino)phenyl]-17ß-hydroxy-17-(1-propynyl)estra-4,9-dien-3-one (empirical formula is C29H35NO2),[29] CAS Registry Number 84371-65-3,[30] and its active monodemethylated, didemethylated, and hydroxylated metabolites** be added to the Sixth Unregulated Contaminant Monitoring Rule (UCMR 6).

As it pertains to drinking water analytical methods, multiple studies have detected mifepristone in water, demonstrating there are valid means of testing water samples (more on this is detailed below). Hence, there is no reason to delay placement on the UCMR 6.

Concerns Related to Proposed Pharmaceutical Monitoring in a Future UCMR

In its call for comments on both the UCMR 6 and Draft Drinking Water Contaminant Candidate List 6 (CCL 6), the EPA acknowledged that pharmaceuticals in drinking water sources have been a public concern for over a decade.[31] Indeed, evidence today shows that even in trace amounts, contamination from various pharmaceuticals and endocrine-disrupting pollutants *(mifepristone is both a pharmaceutical and an endocrine disruptor)* can be detrimental to animal health and pose clear risks to human health. While national occurrence tracking is needed to better understand the persistence of mifepristone under real-world conditions, mifepristone and its active metabolites present a similarly great risk of harm to our ecosystem.

To that end, it was encouraging to see the inclusion of the pharmaceutical group on the draft CCL 6; however, LCA has numerous concerns with this grouping, which are outlined in our recent comment

[28] "RFK Jr Sounds Alarm on US Health Crisis. 'Our Children Are in Trouble,'" YouTube, April 8, 2025, https://www.youtube.com/shorts/shX_OHfg1Wo; Brady E. Hamilton, Ph.D., Joyce A. Martin, M.P.H., and Michelle J.K. Osterman, M.H.S., "Vital Statistics Rapid Release | Births: Provisional Data for 2024," National Vital Statistics System, No. 38, April 2025, https://www.cdc.gov/nchs/data/vsrr/vsrr038.pdf.
[29] "Highlights of Prescribing Information Mifepristone Tablets," The U.S. Food and Drug Administration, Revised January 2023, https://www.fda.gov/media/164653/download.
[30] "Mifepristone," CAS, a division of the American Chemical Society, n.d. Accessed April 17, 2026, https://commonchemistry.cas.org/detail?cas_rn=84371-65-3 (CAS RN: 84371-65-3). Licensed under the Attribution-Noncommercial 4.0 International License (CC BY-NC 4.0).
[31] USEPA. "Revisions To Establish the Sixth Unregulated Contaminant Monitoring Rule (UCMR 6) for Public Water Systems," *Federal Register*, Vol. 91, No. 125. P. 39952, July 1, 2026, https://www.federalregister.gov/documents/2026/07/01/2026-13263/revisions-to-establish-the-sixth-unregulated-contaminant-monitoring-rule-ucmr-6-for-public-water; USEPA, "Drinking Water Contaminant Candidate List 6-Draft. Federal Register," Vol. 91, No. 65. P. 17186, April 6, 2026, https://www.federalregister.gov/documents/2026/04/06/2026-06662/drinking-water-contaminantcandidate-list-6-draft.

to the Science Advisory Board Contaminant Candidate List (CCL) 6 Augmented Drinking Water Committee (DWC).[32]

In short, EPA actions on pharmaceuticals suggest that mifepristone and its active metabolites will be overlooked.

This concern was underscored in the call for comments on the proposed UCMR 6. The EPA outlines that its current actions in relation to pharmaceutical contamination, namely leading inter-governmental efforts on pharmaceuticals in water and supporting "coordination of joint studies," including "a pharmaceuticals group on the draft CCL 6," and its work on the Human Health Benchmarks for Pharmaceuticals (HHB-Rx) in Drinking Water, all "support the agency's approach to prioritize specific pharmaceuticals and develop drinking water analytical methods to support monitoring in a future UCMR." Though admirable, this summary ignores currently available data on mifepristone and its active metabolites demonstrating the need for immediate, not future, UCMR 6 monitoring (detailed below). Indeed, these actions are insufficient for multiple reasons:

1. The EPA had been made aware on multiple occasions of the unique human health risks and environmental harm caused by abortion pill water pollution, most recently via numerous comments to the agency regarding adding mifepristone and its active metabolites to the Draft CCL 6. Given this awareness, if it is coordinating studies on pharmaceutical pollution, LCA strongly urges it to study the adverse health and environmental impacts of abortion pill by-products. This can start with UCMR 6 monitoring.

2. It is not entirely clear whether or how the sixth draft CCL's pharmaceutical grouping will work in practice, and current parameters around the grouping are far too vague. Specifically, in listing this group on the draft CCL 6 the EPA made it clear that it will not necessarily lead to "regulatory decisions for the entire group;" rather, "the EPA will evaluate available scientific data on the listed groups, subgroups, and individual contaminants, as appropriate, included in the group to inform any regulatory determinations for the group, subgroup, or individual contaminants in the group."[33] Given the FDA has approved over 20,000 prescription drug products for marketing,[34] this is a monumental task that necessitates narrowing. While it seems the EPA will do so both by utilizing the Human Health Benchmarks for

[32] "Comment to: The Science Advisory Board Contaminant Candidate List (CCL) 6 Augmented Drinking Water Committee (DWC)," Liberty Counsel Action, June 2026, https://abortioninourwater.org/PDFs/LCA/LCAComment_to_ScienceAdvisoryBoardCCL6AugmentedDrinkingWaterCommittee-June2026.pdf.
[33] "Drinking Water Contaminant Candidate List 6-Draft," 91 Fed. Reg. 17186; Apr. 6, 2026, https://www.federalregister.gov/documents/2026/04/06/2026-06662/drinking-water-contaminant-candidate-list-6-draft.
[34] U.S. Food and Drug Administration, "FDA at a Glance," November 2020, https://www.fda.gov/media/143704/download.

Pharmaceuticals (HHB-Rx) in Drinking Water[35] (the EPA notes it was informed *"about the current research needs for this broad class of chemicals"* by *"the application of the benchmarks for pharmaceuticals in the CCL screening process"*[36]) and by limiting its research to use "available scientific data," the HHB-Rx entirely overlooks the abortion pill (detailed below), and there are notable gaps in the "available scientific data." The UCMR is poised to address these gaps; hence, pharmaceuticals posing a greater risk than others, such as mifepristone and its active metabolites, as the body of this comment demonstrates, merit monitoring (listing on UCMR 6).

3. The EPA's current HHB-Rx intentionally excludes metabolites (unless the metabolites themselves have an FDA-approved oral dose),[37] yet "more than 50% of the most consumed pharmaceuticals are **excreted in higher amounts as metabolites than as parents**,"[38] and, as the EPA stated in its 2019 rule on pharmaceuticals, "pharmaceuticals are thought to be **primarily entering the environment through excretion.**"[39] Indeed, the aforementioned study further outlines how *both* "pharmaceuticals and their human metabolites" have emerged as contaminants of concern "in the aquatic environment," emphasizing that even though there are challenges in detection, "**metabolite inclusion in chemical risk assessment**" is needed due to the "large fraction to the total pharmaceutical contribution in wastewater."[40]

   Multiple scientific sources emphasize the importance of including metabolites in environmental study:

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[35] These are "non-enforceable drinking water levels that provide information about adverse health effects from drinking water exposure to contaminants that have no drinking water standards or health advisories." "Technical Support Document for the Draft Sixth Contaminant Candidate List (CCL 6) - Chemical Contaminants," United States Environmental Protection Agency, February 2026, https://www.epa.gov/system/files/documents/2026-02/draft-ccl-6-chemical-tsd-02.26.26-508.pdf.

[36] USEPA, "Drinking Water Contaminant Candidate List 6-Draft," Federal Register, Vol. 91, No. 65. P. 17186, April 6, 2026, https://www.federalregister.gov/documents/2026/04/06/2026-06662/drinking-water-contaminantcandidate-list-6-draft.

[37] See section "2.4. Exclusion Criteria," which states, "Benchmarks were developed only for those pharmaceuticals with FDA-approved oral dosage information from labels on publicly available federal databases (FDA, 2022; NIH, 2022). A significant portion of the candidate compounds (322 out of 696) were excluded from HHB-Rx development based on the exclusion criteria listed below (Figure 1; to view the complete list of the pharmaceuticals excluded from benchmark development at this time, please see the Technical Support Appendix, tab "Exclusion List"). . . The compound is not an active pharmaceutical ingredient (e.g., chemicals used in the production of a pharmaceutical, metabolites of pharmaceuticals that do not have FDA approved oral doses)." U.S. Environmental Protection Agency, "Human Health Benchmarks for Pharmaceuticals in Drinking Water," March 2026, https://www.epa.gov/system/files/documents/2026-03/human-health-benchmarks-for-pharmaceuticals-2026-technical-document.pdf.

[38] Corina Meyer et al., "How Wastewater Reflects Human Metabolism–Suspect Screening of Pharmaceutical Metabolites in Wastewater Influent," *Environmental Science & Technology*, May 24, 2024, https://pubs.acs.org/doi/10.1021/acs.est.4c00968.

[39] Environmental Protection Agency, "Management Standards for Hazardous Waste Pharmaceuticals and Amendment to the P075 Listing for Nicotine | Final rule," 84 Fed. Reg. 5816, February 22, 2019, https://www.govinfo.gov/content/pkg/FR-2019-02-22/pdf/2019-01298.pdf.

[40] Corina Meyer et al., "How Wastewater Reflects Human Metabolism–Suspect Screening of Pharmaceutical Metabolites in Wastewater Influent."

- A 2014 study outlines the common presence of pharmaceuticals *and* their metabolites in surface (lakes, rivers) and effluent waters, underscoring the need for "analytical research **and monitoring programs**" to "be directed not only towards parent pharmaceuticals **but also towards relevant metabolites to have a realistic overview of the impact of pharmaceuticals in the aquatic environment.**"[41]
- A 2017 study found that the predicted exposure concentrations (PEC) and/or toxicity of metabolites was anticipated "*to be higher than that of their parent APIs* [active pharmaceutical ingredients], *which resulted in a total of 18 metabolites (from 12 parents) that have greater HQs* [hazard quotients] *than their parents*. *This result clearly demonstrated that* ***some metabolites may potentially pose greater risk than their parent APIs in the water environment,***" making the monitoring of them vitally important.[42] Indeed, their significance "should be carefully evaluated for monitoring strategy, priority setting, and scoping of the environmental risk assessment of APIs."[43] The study concludes by highlighting the ***"excretion fraction"*** of metabolites, as well as their ***"eco-toxicity, and environmental fate properties."***
- A 2021 study states, "*Despite there are thousands of PhACs* [pharmaceutically active substances] *on the market, very few are included in regular water control programs*. ***The lack of data on occurrence in water is even more evident for their metabolites and TPs*** [transformation/degradation products]***, which may be as harmful as the compounds of origin."***[44] Going on, this study further notes that although there is a general lack of data on metabolites in water, of the numerous other compounds that have been found, this is "surely 'the tip of the iceberg' of a problem that must be addressed as soon as possible."[45] It advocates for "ambitious monitoring programs making use of wide-scope screening methodologies," and that "target and suspect screening should include large lists of compounds, containing parent PhACs but also metabolites and TPs already reported in the scientific literature, regardless of whether reference standards are available or not."[46]
- A 2024 study outlines that "continuous addition" of parent pharmaceuticals (and personal care products) **and their metabolites** "in small notable amounts, has led to their being considered as 'pseudo-persistent'" in the environment (detailed further

[41] Emma Gracia-Lor et al., "Investigation of Pharmaceutical Metabolites in Environmental Waters by LC-MS/MS," *Environmental Science and Pollution Research International,* Vol. 21, No. 8, April 2014, https://pubmed.ncbi.nlm.nih.gov/24407783/.
[42] Eun Jeong Han and Dong Soo Lee, "Significance of Metabolites in the Environmental Risk Assessment of Pharmaceuticals Consumed by Humans," *Science of the Total Environment*, Vol. 592, August 15, 2017, https://www.sciencedirect.com/science/article/pii/S004896971730548X.
[43] Ibid.
[44] M. Ibáñez et al., "Occurrence of Pharmaceutical Metabolites and Transformation Products in the Aquatic Environment of the Mediterranean Area," *Trends in Environmental Analytical Chemistry*, Vol. 29, March 2021, https://www.sciencedirect.com/science/article/pii/S2214158821000052.
[45] Ibid.
[46] Ibid.

below). Going on, the study emphasizes "**they are biologically active even at low concentrations, hence their presence in treated drinking water may pose a significant threat to the drinking water quality.**"[47]

- Another 2024 study in the *Journal of Xenobiotics* states:

  "*Comprehensive environmental monitoring that accounts for both pharmaceuticals and their metabolites is essential for accurately assessing their impact on aquatic ecosystems. In 2024, Meyer et al.* [referenced above] *revealed that* ***metabolites represent a significant portion of the pharmaceutical load in wastewater, emphasizing the critical need to include these compounds in chemical risk assessments. Without this inclusion, the environmental and health hazards posed by pharmaceutical contamination are underestimated***."[48]
- A 2025 study emphasizes how important it is to consider "**both parent compounds and metabolites** in wastewater treatment processes to **address contaminants holistically**."[49]
- A subsequent 2025 likewise outlines that the removal of metabolites "requires similar attention as the parents in wastewater treatment, especially since they can be present in high concentrations and retain biological activity," specifically finding that "phase I **metabolites show a similar behavior to their parent compounds and are often not more efficiently abated**, with median removals ranging between 38% to 53% for parents and phase I metabolites."[50]
- As it pertains to mifepristone's metabolites specifically, a 2026 study (that detected mifepristone in U.S. tap and source waters referenced above) notes that while it did not test for mifepristone's metabolites, future studies should:

  "Future studies should investigate whether water samples contain . . . [the 5 metabolites of mifepristone, including the 3 most common: metapristone (monodemethylated mifepristone), didemethylated mifepristone, and 22-OH mifepristone], which are pharmacologically active, able to bind to human

[47] Kimberly Etombi Muambo et al., "Pharmaceuticals in raw and treated water from drinking water treatment plants nationwide: Insights into their sources and exposure risk assessment," Water Research X, Vol. 24, September 1, 2024, https://www.sciencedirect.com/science/article/pii/S258991472400046X.

[48] Paula Paíga, Cristina Delerue-Matos, "Tracing Pharmaceuticals in Water Systems: Focus on Neurodegenerative and Psychiatric Treatments," Journal of Xenobiotics, November 21, 2024, https://pmc.ncbi.nlm.nih.gov/articles/PMC11586952/#notes3.

[49] Corina Meyer et al., "Ozonation of Pharmaceuticals and Their Human Metabolites in Wastewater–Insights from Laboratory Experiments and Field Data," *Environmental Science & Technology,* September 30, 2025, https://pubmed.ncbi.nlm.nih.gov/40977602/.

[50] Notably, while "significant median reductions of 79% to 92% for parent pharmaceuticals" were found with advanced treatments such as ozonation, the median reductions for metabolites were only 54% to 82%. Corina Meyer et al., Comparing the abatement of pharmaceuticals and their human metabolites in wastewater treatment plants – Insights from biological and advanced treatment stages" *Water Research,* Vol 285, October 1, 2025, https://www.sciencedirect.com/science/article/pii/S0043135425008917.

> *progesterone and glucocorticoid receptors, and therefore should be regarded as significant environmental pollutants*."[51]

Finally, the EPA itself recognizes the importance of monitoring other forms of metabolites, as it proposed monitoring pesticide metabolites.[52] The fact that the HHB-Rx and, subsequently, the draft CCL 6 and proposed UCMR 6, entirely overlook *pharmaceutical metabolites* is all the more concerning, particularly when it comes to mifepristone's active metabolites.

4. The EPA's current HHB-Rx (which the agency implies will assist in narrowing its research efforts related to pharmaceuticals in drinking water[53]) suggests the agency is intentionally avoiding reference to abortion pills. Only 374 pharmaceuticals have been given benchmarks, and mifepristone is not among them, but the second pill in the abortion drug regimen, misoprostol, is among them.[54] There does not appear to be a logical reason for the HHB-Rx to include misoprostol and exclude mifepristone, particularly as both are used as abortifacients. Furthermore, mifepristone forms active metabolites, which are primarily eliminated from the body in feces, as well as urine,[55] and these metabolites are more than likely in our drinking water (as detailed elsewhere, this comment). Conversely, misoprostol is "excreted in urine as inactive metabolites"[56] (though information varies slightly on this point[57]); another source notes "less than 1% of a dose is excreted in the urine as unchanged

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[51] Elise Rose and Michael Varveris, "Anti-Progesterone in Environmental Water," *Issues in Law and Medicine | A Journal of the Alliance for Hippocratic Medicine*.
[52] USEPA, "Revisions To Establish the Sixth Unregulated Contaminant Monitoring Rule (UCMR 6)."
[53] Specifically, the draft CCL 6 states, "The benchmarks, based on potential health effects from exposure via drinking water, informed the screening of pharmaceuticals and identification of the top scoring pharmaceuticals. Furthermore, the application of the benchmarks for pharmaceuticals in the CCL screening process informed the EPA about the current research needs for this broad class of chemicals." See: USEPA, "Drinking Water Contaminant Candidate List 6-Draft," Federal Register. Vol. 91, No. 65. P. 17186.
[54] "Human Health Benchmarks for Pharmaceuticals in Drinking Water," U.S. Environmental Protection Agency, Office of Water, March 2026, https://www.epa.gov/system/files/documents/2026-03/human-health-benchmarks-for-pharmaceuticals-2026-technical-document.pdf.
[55] N. N. Sarkar, "Mifepristone: bioavailability, pharmacokinetics and use-effectiveness," *European Journal of Obstetrics, Gynecology, and Reproductive Biology*, Vol. 101, No. 2, March 10, 2002, https://www.ejog.org/article/S0301-2115(01)00522-X/abstract.
[56] Neal M. Davies, James Longstreth, and Fakhreddin Jamali, "Misoprostol Therapeutics Revisited," Pharmacotherapy, Vol. 21, No. 1, 2001, https://doi.org/10.1592/phco.21.1.60.34442. See also: BenchChem Technical Support Team, "The Pharmacokinetics and Metabolism of Misoprostol Acid: A Technical Guide," May 2026, https://pdf.benchchem.com/33/The_Pharmacokinetics_and_Metabolism_of_Misoprostol_Acid_A_Technical_Guide.pdf and RxReasoner, "Misoprostol," accessed July 29, 2026, https://www.rxreasoner.com/substances/misoprostol/pharmacology.
[57] There is different information on whether the active metabolite is excreted in urine; one source notes only "1-4% of misoprostol acid [its active metabolite] is excreted in the urine," see: "Product Information, MS-2 Step," May 22, 2014, https://www.tga.gov.au/sites/default/files/auspar-mifepristone-misoprostol-141013-pi.pdf. Another source states: "No misoprostol acid has been detected in the urine of humans, although 1-4% of the dose has been recovered in the urine of dogs and rats," see: Pfizer Canada Inc., "Product Monograph, Cytotec (Misoprostol), 100, 200 mcg Tablets," September 11, 2003, https://pdf.hres.ca/dpd_pm/00003172.PDF. Either way, most of what is excreted, if not all, is inactive.

drug."[58] Consider also that the half-life of misoprostol is very short, approximately 30 minutes,[59] whereas mifepristone has a relatively long half-life of 30+ hours[60] (for more on this, see the section entitled "Mifepristone Has a Long Half-Life, is (Likely) Pseudo-Persistent, & Has Potential to Bioaccumulate").

In other words, misoprostol seems much less likely than mifepristone to contaminate our drinking water from excretion (that is, evidence shows its active components are less likely to infiltrate our drinking water), and while the drug may pollute water from unused pills being disposed of directly into the toilet, that applies to mifepristone as well. Furthermore, consider that misoprostol is not listed among the benchmarks as an abortifacient but rather for one of its other uses, to reduce "the risk of NSAID-induced gastric ulcers."

Why is it not listed for its use in the abortion pill protocol, and why is mifepristone not listed at all? It may be due to a lack of data: "EPA used readily available data" in compiling the HHB-Rx,[61] and there is not as much "readily available data" on mifepristone and its active metabolites' presence in drinking water. Yet that is all the more reason to include them on both the CCL 6 and the UCMR 6, as the available data suggests it is incredibly harmful (again, further details are in the body of the comment).

An objective observer may conclude that the abortion issue is so politically charged that it was easier to simply not address the above realities and therefore exclude mifepristone from the HHB-Rx, CCL 6, and UCMR 6. Such a decision, conscious or not, would align with past official action on this drug. *(Outlined further below, but in short, for the last two and half decades the federal government has turned a blind eye to the dangerous realities of chemical abortion, essentially giving the abortion industry a free pass to not only traumatize women but also to contaminate our water with chemically aborted human fetal remains and medical waste.)*

In short, mifepristone's inclusion under the broadly defined "pharmaceutical group" fails to adequately highlight the urgent need for monitoring and evaluation.[62] As the body of this comment

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[58] Prescribers' Digital Reference by ConnectiveRx, "Cytotec," accessed August 11, 2026, https://www.pdr.net/drug-summary/?drugLabelId=Cytotec-misoprostol-1044.
[59] "Cytotec misoprostol tablets," U.S. Food and Drug Administration, February 2018, https://www.accessdata.fda.gov/drugsatfda_docs/label/2018/019268s051lbl.pdf.
[60] "Product Information, MS-2 Step," May 22, 2014, https://www.tga.gov.au/sites/default/files/auspar-mifepristone-misoprostol-141013-pi.pdf.
[61] "Fact Sheet: Human Health Benchmarks for Pharmaceuticals (HHB-Rx)," U.S. Environmental Protection Agency, accessed June 16, 2026, https://www.epa.gov/system/files/documents/2026-03/fact-sheet-2026-human-health-benchmarks-for-pharmaceuticals.pdf.
[62] "Basic Information on the CCL and Regulatory Determination," United States Environmental Protection Agency, January 9, 2026, https://www.epa.gov/ccl/basic-information-ccl-and-regulatory-determination. See also: "SDWA Evaluation and Rulemaking Process," United States Environmental Protection Agency, June 17, 2025, https://www.epa.gov/sdwa/sdwa-evaluation-and-rulemaking-process.

demonstrates, mifepristone's combined characteristics—its progesterone-blocking action, increasing usage, and ability to generate medical waste, among others—justify treating it separately from the overly broad pharmaceuticals category containing thousands of compounds. The EPA can help advance critically needed research and regulation on these chemical compounds by adding mifepristone and its active metabolites to the final UCMR 6.

Known (& Possible New) Drinking Water Analytical Methods

As it pertains to "recommended drinking water analytical method(s)," in October 2025, the *New York Times* reported the following:

> "*Senior officials at the Environmental Protection Agency directed a team of scientists over the summer to assess whether the government could develop methods for detecting traces of abortion pills in wastewater . . . Scientists who specialize in chemical detection told the senior officials that there are currently no E.P.A.-approved methods for identifying mifepristone in wastewater—**but that new methods could be developed,** according to two people familiar with the events, who spoke on the condition of anonymity to discuss sensitive information*."[63]

While the article also notes "there is no sign that any methods are under development for detecting mifepristone in wastewater," LCA humbly proposes such efforts, that is, developing methods for detecting mifepristone and its active metabolites, could easily be (re)started. To assist in such efforts, we compiled information from several peer reviewed studies that outline various methodologies for testing water for mifepristone and testing water for pharmaceutical metabolites, some of which are similar to the EPA's testing method, "Determination of Pharmaceuticals and Personal Care Products in Drinking Water by Solid Phase Extraction and Liquid Chromatography Electrospray Ionization Tandem Mass Spectrometry (LC/ESI-MS/MS)."[64]

1. *Anti-Progesterone in Environmental Water*

Summary: This study tested the municipal tap water and environmental waters in three American cities, for a total of nine groupings (one grouping of tap water, one grouping of water samples taken upstream from wastewater treatment plants, and 1 grouping of water samples taken downstream

[63] Caroline Kitchener and Coral Davenport, "The E.P.A. Followed Up on an Unusual Request About Abortion Pills," The New York Times, October 10, 2025, https://www.nytimes.com/2025/10/10/us/politics/epaabortion-wastewater.html.

[64] U.S. Environmental Protection Agency, "Analytical Methods Developed by EPA for Analysis of Unregulated Contaminants," Updated September 29, 2025, https://www.epa.gov/dwanalyticalmethods/analytical-methods-developed-epa-analysis-unregulated-contaminants; U.S. Environmental Protection Agency, "Method 542: Determination of Pharmaceuticals and Personal Care Products in Drinking Water by Solid Phase Extraction and Liquid Chromatography Electrospray Ionization Tandem Mass Spectrometry (LC/ESI-MS/MS)," September 2016, https://www.epa.gov/sites/default/files/2016-09/documents/method-542-determination-pharmaceuticals-personal-care-products-drinking-water.pdf.

from wastewater treatment plants). It found significant levels of mifepristone in 8 of the 9 sample groups. As outlined in its Materials and Methods section:

> *". . . water samples were sent blind (without source identification) to BioDetection Systems laboratory in the Netherlands which dissolved the samples in DMSO and used PR CALUX® bioassays to test for mifepristone 29. The PR CALUX® activity was determined after 24h exposure and benchmarked against mifepristone (Ru486). Briefly, optimized solid-phase extraction (SPE) was applied to extract water samples. The enriched extract with a mixture of compounds was exposed to genetically modified cell lines in CALUX® bioassays. Firefly luciferase gene, coupled with responsive elements (REs) such as reporter genes, is incorporated into the DNA of these cell lines. The presence of an appropriate substrate, in this case mifepristone, triggers the activation of such REs, thus initiating the creation of luciferase, which then emits light. The amount of light produced is measured by luminometer and is proportional to the amount of ligand-specific receptor binding, which is benchmarked against a reference level of mifepristone. "*

In a *Politico* article, the author of this study further explained the process, wherein they contracted with a laboratory in the Netherlands that "tested specifically for mifepristone."[65] She goes on to note, "This is a bio assay that's based on enzymes and antibodies are like a lock and key . . . In order for something else to fit in there, it has to be very similar. And mifepristone is not a simple molecule."[66] More specifically, "any other chemical detected would have to be . . . 'identical or nearly identical' to the abortion medication" to have also been detected.[67]

While "the odds against that would be very great," she does acknowledge "that some of what was detected 'could be a metabolite of mifepristone that's very close in structure.'"[68] If that is so, it would actually provide further proof of our concern that these active metabolite contaminants are in our water and that further testing is warranted.

2. Multi-criteria decision analysis: technique for order of preference by similarity to ideal solution for selecting greener analytical method in the determination of mifepristone in environmental water samples[69]

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[65] Alice Miranda Ollstein and Ariel Wittenberg, "Activists 'throwing everything' they can against abortion turn to wastewater data," *Politico,* July 26, 2026, https://www.politico.com/news/2026/07/26/abortion-opponents-new-weapon-wastewater-data-01011537?utm_source=substack&utm_medium=email.
[66] Ibid.
[67] Ibid.
[68] Ibid.
[69] Tlou A. Makwakwa, Dineo E. Moema, and Titus A. M. Msagati, "Multi-criteria decision analysis: technique for order of preference by similarity to ideal solution for selecting greener analytical method in the determination of mifepristone in environmental water samples," *Environmental Science and Pollution Research*, Vol. 31, April 5, 2024, https://link.springer.com/article/10.1007/s11356-024-32961-3.

Summary: This study reviewed various methods for detecting mifepristone in environmental water samples, seeking the "greenest," that is, the most environmentally friendly, option. As outlined in the abstract:

> *"This work proposes the use of multi-criteria decision analysis (MCDA) to select a more environmentally friendly analytical procedure [for detecting mifepristone]. TOPSIS, which stands for Technique for Order of Preference by Similarity to Ideal Solution, is an example of a MCDA method that may be used to rank or select best alternative based on various criteria.* ***Thirteen analytical procedures were used in this study as TOPSIS input choices*** *for mifepristone determination in water samples. . . The most preferred analytical method according to the ranking was solid phase extraction with micellar electrokinetic chromatography (SPE-MEKC). "*

The specific methods are outlined in Table 2;[70] see also Table 4.[71]

3. *LC-MS/MS determination of potential endocrine disruptors of cortico signaling in rivers and wastewaters*[72]

Summary: This study detected mifepristone in Swiss wastewaters, with the highest detection being 17 ng/L in hospital wastewaters. It provides a detailed description of its methods in the section titled, "Experimental Part." Specifically, it states:

> "*Samples were spiked with five deuterated IS (Table 1, 100 ng/L each). River water (1 L), wastewater effluent (1 L), and untreated wastewater (0.5 L) were filtered through glass fibre (GF/F (0.7 µm), Whatmann) the same day of sampling and stored at 4 °C in the dark. Ammonium formate was added to the samples to reach 15 mM and pH 6.50–6.85, and solid-phase extraction (SPE) was performed on a SPE cartridge consisting of Env+ (150 mg, Separtis), Strata-X-CW (100 mg, Phenomenex), Strata-X-AW (100 mg, Phenomenex) and Oasis HLB (200 mg, Waters). This solid-phase mixture has been developed in-house and successfully applied to extract a wide range of chemicals from the water [31].*
>
> *"Adsorbed compounds were eluted twice with 5 mL acidic (2% formic acid) methanol/ethyl acetate (1:1). The pooled solvents were evaporated under a gentle N2 stream. The residue was transferred to a conical vial (1.5 mL size), and the solvent was again evaporated down to ~10–20 µL which then was air-dried.*

[70] Ibid., https://link.springer.com/article/10.1007/s11356-024-32961-3/tables/2.
[71] Ibid., https://link.springer.com/article/10.1007/s11356-024-32961-3/tables/4.
[72] Adrian A. Ammann, et al., "LC-MS/MS determination of potential endocrine disruptors of cortico signalling in rivers and wastewaters," Analytical and Bioanalytical Chemistry, Vol. 406, October 7, 2014, https://link.springer.com/article/10.1007/s00216-014-8206-9#Tab5, Table 4 (https://link.springer.com/article/10.1007/s00216-014-8206-9/tables/4).

> *Injection solutions were prepared by dissolving the residue in 30 µL methanol followed by the addition of 70 µL acetonitrile. This solution was diluted 1:10 or 1:5 in a 1:1 mixture of HPLC eluents A and B."*

It then goes into Chromatography and mass spectrometry before the final paragraph in this section, "Data processing and evaluation," outlining:

> *"Blank values for the whole workup, pre-concentration and measurement procedure were obtained by deuterated standard addition to purified water (1 L), which was handled as a sample. Blank values were calculated as integrals over the expected peak base width and subtracted from samples before quantitation. Background equivalent concentrations (BEC) were calculated from blank samples and subtracted from other samples. Recoveries over the whole workup and pre-concentration were obtained from five deuterated chemicals (Table 1) spiked into a blank sample. Concentrations given in Table 4 are corrected by the recovery of the nearby eluting deuterated IS. Mono-hydroxylated metabolite concentrations were calculated from parent compound calibrations. Detection limits depend on the matrix, which was different in each sample; therefore, BEC are used to calculate detection limits (DL; Table 4) as an approximation of variable DL in real samples."*

4. *Analysis of hormone antagonists in clinical and municipal wastewater by isotopic dilution liquid chromatography tandem mass spectrometry*[73]
Summary: This study outlines that mifepristone has been detected in both hospital wastewaters and wastewater treatment plant effluent in China. Specifically, it states, mifepristone ". . . *was found in 17 samples [of hospital effluent] with a maximum value of 195 ng/L.*" This same study further notes mifepristone was found in "*all the influent sewage samples*" and was likewise "*identified in the effluent*" (at .70 and .75 n/L). It provides a detailed description of its methods in the section titled "Experimental."

Note: The following three studies, also referenced above, are included to demonstrate it is possible to also test for a drug's metabolites.

5. *Tracing Pharmaceuticals in Water Systems: Focus on Neurodegenerative and Psychiatric Treatments*[74]
Summary: This study tested for 30 compounds including 7 metabolites. It detected 5 metabolites. It has a detailed methods section (2) and concludes that it *"developed and validated a **robust SPE-***

[73] Xianjun Liu et al., "Analysis of hormone antagonists in clinical and municipal wastewater by isotopic dilution liquid chromatography tandem mass spectrometry," *Analytical and Bioanalytical Chemistry,* Vol. 396, No. 8, March 1, 2010, https://research.ebsco.com/c/r3w5i4/viewer/pdf/gmrego5wyz?route=details.
[74] Paula Paíga, Cristina Delerue-Matos, "Tracing Pharmaceuticals in Water Systems: Focus on Neurodegenerative and Psychiatric Treatments," *Journal of Xenobiotics*, November 21, 2024, https://pmc.ncbi.nlm.nih.gov/articles/PMC11586952/#notes3.

UHPLC-MS/MS methodology to extract and analyze 30 compounds, including pharmaceuticals, *for neurodegenerative diseases, psychiatric drugs* ***and their metabolites . . .*** *in surface water and wastewater samples."* Under the section entitled, "Materials and Methods," it states:

> *In the LC-MS/MS analysis, rigorous criteria were applied for both quantification and identification: (i) detection in both the quantification and qualification MRM transitions; (ii) consistent retention time of the analyte in the samples, closely matching that of the reference standard under identical analytical conditions; and (iii) the ratio of quantifier to qualifier ions within ±20% of the ratio observed in the standard. Quantification was based on the linearity of the calibration curve and evaluated over the specified concentration range."*

6. ***How Wastewater Reflects Human Metabolism–Suspect Screening of Pharmaceutical Metabolites in Wastewater Influent***[75]

Summary: This study used a method that was able to detect 37 different metabolites. As stated in the abstract,

> "*Pharmaceuticals and their human metabolites are contaminants of emerging concern in the aquatic environment. Most monitoring studies focus on a limited set of parent compounds and even fewer metabolites. However, more than 50% of the most consumed pharmaceuticals are excreted in higher amounts as metabolites than as parents, as confirmed by a literature analysis within this study. Hence, we applied a wide-scope suspect screening approach to identify human pharmaceutical metabolites in wastewater influent from three Swiss treatment plants . . . Online solid phase extraction combined with liquid chromatography coupled to high-resolution tandem mass spectrometry was used to analyze the samples. Data processing, annotation, and structure elucidation were achieved with various tools, including molecular networking as well as SIRIUS/CSI:FingerID and MetFrag for MS2 spectra rationalization. We confirmed 37 metabolites with reference standards and 16 by human liver S9 incubation experiments. More than 25 metabolites were detected for the first time in influent wastewater . . .* ***metabolites pose a large fraction to the total pharmaceutical contribution in wastewater, highlighting the need for metabolite inclusion in chemical risk assessment****."*

7. In addition, Bench Chemicals, a "supplier of high-quality chemicals and biochemicals for laboratory and R&D use,"[76] has published a method for testing human urine for one of mifepristone's active metabolites, 22-hydroxy mifepristone. Specifically, their resource document outlines "a detailed protocol for the quantification of 22-hydroxy mifepristone in human urine using a stable

[75] Corina Meyer et al., "How Wastewater Reflects Human Metabolism–Suspect Screening of Pharmaceutical Metabolites in Wastewater Influent," *Environmental Science & Technology,* May 24, 2024, https://pubs.acs.org/doi/10.1021/acs.est.4c00968.

[76] Bench Chem, "About Us," accessed August 7, 2026, https://www.benchchem.com/about.

isotope-labeled internal standard (22-hydroxy mifepristone-d6) by Liquid Chromatography-Tandem Mass Spectrometry (LC-MS/MS). The use of a deuterated internal standard is critical for accurate quantification as it co-elutes with the analyte and compensates for variations in sample preparation and matrix effects."[77] This protocol may provide a helpful basis for the development of an analytical method that can similarly be used to test water for active mifepristone metabolites.

Taking into account the EPA has an approved method for testing water for certain pharmaceuticals more broadly (as noted above, *Analytical Method 542, "Determination of Pharmaceuticals and Personal Care Products in Drinking Water by Solid Phase Extraction and Liquid Chromatography Electrospray Ionization Tandem Mass Spectrometry (LC/ESI-MS/MS)"*) and considering the EPA's previous efforts related to seeking methods of detection for mifepristone, combined with the information in the above studies, LCA humbly suggests it is entirely feasible to determine a means for testing for mifepristone and its active metabolites by the proposed reporting and sampling requirements date. LCA specifically recommends utilizing the information in the above studies, including by contacting the authors of said studies, to determine the best way(s) to monitor mifepristone and its active metabolites.

Cost Considerations Against the Current Landscape; Proposing the "Polluters Pay"

Current Landscape

Liberty Counsel Action recognizes that there are important fiscal considerations related to adding an analytical method to the EPA's proposed list. However, when Americans' health and fertility is at risk, cost implications should not preclude monitoring of these dangerous chemicals. Indeed, Health and Human Services Secretary Robert F. Kennedy Jr. recently called for an investigation into our nation's "alarming decline in fertility,"[78] and early in his second term President Trump declared that "our public policy must make it easier for loving and longing mothers and fathers to have children."[79] President Trump's administration has subsequently devoted substantial efforts to policies that encourage family formation.[80]

Against this backdrop, knowing whether Americans are ingesting trace amounts of chemicals that are designed to **inhibit** fertility is arguably essential, and it would be inconsistent to ignore a potential

[77] BenchChem Technical Support Team, "Application Note & Protocol: Quantification of 22-Hydroxy Mifepristone in Human Urine using a Deuterated Internal Standard by LC-MS/MS," April 2026, Application Note & Protocol: Quantification of 22-Hydroxy Mifepristone in Human Urine using a Deuterated Internal Standard by LC-MS/MS.
[78] @Robert F. Kennedy Jr, X Post, September 20, 2024, https://x.com/RobertKennedyJr/status/1837263154478563798?lang=en.
[79] Executive Order No. 14216, 90 FR 10451, February 18, 2025, https://www.federalregister.gov/documents/2025/02/24/2025-03064/expanding-access-to-in-vitro-fertilization.
[80] Ibid., see also "Liberty Counsel Action's Comment to the Federal Government on Excepted Fertility Benefit Coverage," Liberty Counsel Action, accessed Aug. 2, 2026, https://lcaction.org/PDFs/LCA/LCAComment_re_FileCode1210-AC40onExceptedFertilityBenefitsJune20261.pdf.

contributing factor of experienced infertility in one agency while advancing policies to address infertility (and its often-unknown causes) in another.

Furthermore, clean, pure drinking water is also a top priority of the current administration; in several major speeches and announcements, President Trump and his administrative teams have repeatedly promoted environmental policies that will advance and maintain "crystal-clean drinking water."[81] The increasing use of chemical abortion, leading to increased disposition of human fetal remains and medical waste in toilets and chemical pollution of our water from mifepristone and its active metabolites, undermines this priority.

Taken together, investigating the occurrence of mifepristone and its active metabolites in drinking water supplies across the nation is a natural next step, aligning closely with these other presidential priorities. As such, it fully justifies the resources required. LCA therefore encourages the EPA to adopt the most effective and fiscally responsible approach to monitoring mifepristone and its active metabolites.

Polluters Should Pay

Ultimately, the cost for cleaning our water should be the responsibility of the abortion pill manufacturers and / or the abortion pill providers that caused the pollution. To ensure the costs associated with reducing mifepristone in our water are borne by those responsible (costs which otherwise would be passed on to and Publicly Owned Treatment Works (POTWs) and taxpayers), we

[81] See: "Remarks by President Trump on America's Environmental Leadership," The White House, July 8, 2019, https://trumpwhitehouse.archives.gov/briefings-statements/remarks-president-trump-americas-environmental-leadership/https://trumpwhitehouse.archives.gov/briefings-statements/remarks-president-trump-americasenvironmental-leadership/, which states: "We want crystal-clean water, and that's what we're doing and that's what we're working on so hard"; "On Earth Day, We Finally Have a President Who Follows Science," The White House | Articles, April 22, 2025, https://www.whitehouse.gov/articles/2025/04/on-earth-day-we-finallyhave-a-president-who-follows-science/, which states: "Under President Donald J. Trump, America is back — leveraging environmental policies rooted in reality to promote economic growth while maintaining the standards that have afforded Americans the cleanest air and water in the world for generations;" "President Trump Signs Executive Order on Modernizing America's Water Resource Management and Water Infrastructure," Executive Office of the President Council on Environmental Quality, October 13, 2020, https://trumpwhitehouse.archives.gov/wp-content/uploads/2020/01/201013-FINAL-Press-Release-WaterEO-clean.pdf, which states: "Under the Trump Administration, Federal agencies that have primary authority for water policy have coordinated like never before, to help ensure that all Americans have access to safe drinking water, reliable rural and farm water supplies, and clean water for recreation and enjoyment;" "President Donald J. Trump is Modernizing America's Water Resource Management and Infrastructure," White House Fact Sheets, October 14, 2020, https://trumpwhitehouse.archives.gov/briefingsstatements/president-donald-j-trump-modernizing-americas-water-resource-management-infrastructure/, which states: "Modernizing management of our Nation's water infrastructure to ensure access to safe, clean, and reliable water supplies will improve the quality of life for every American"; and "Statement by President elect Donald J. Trump Announcing the Nomination of Lee Zeldin as Administrator of the Environmental Protection Agency (EPA," The American Presidency Project, November 11, 2024, https://www.presidency.ucsb.edu/documents/statement-president-elect-donald-j-trump-announcing-thenomination-lee-zeldin, in which President Trump referred to Administrator Lee Zeldin (then-nominee for Administrator of the EPA) as a "true fighter for America First policies" who "will ensure fair and swift deregulatory decisions that will be enacted in a way to unleash the power of American businesses, while at the same time maintaining the highest environmental standards, including the cleanest air and water on the planet."

specifically propose the EPA work with Congress on new statutory language that ensures abortion pill polluters are the ones held accountable for their pollution. The actual polluters should be the ones to pay for the clean-up costs – not the POTWs that are effectively "passive receivers" of said pollution.[82]

As LCA outlined in a memorandum to the EPA on this topic,[83] this model has been proposed by Administrator Lee Zeldin and Assistant Administrator of the Office of Water Jessica Kramer for PFAS pollution: In April 2025, an announcement on "major EPA actions to combat PFAS contamination" included working with Congress "to establish a clear liability framework that operates on polluter pays and protects passive receivers."[84] A statement from Administrator Zeldin similarly notes:

> *"When it comes to PFOA and PFOS contamination, holding polluters accountable while providing certainty for passive receivers that did not manufacture or generate those chemicals continues to be an ongoing challenge . . . EPA intends to do what we can based on our existing authority**, but we will need new statutory language from Congress to fully address our concerns with passive receiver liability**. The Trump Administration is fully committed to ensuring all Americans have the cleanest air, land, and water."*[85]

Indeed, we encourage the EPA to both work with Congress and use its "regulatory and enforcement tools" to ensure that for chemical abortion pollution – the polluter pays.[86]

Key Recommendation

Given that the UCMR is only developed once every five years and that contamination from chemical abortion continues to increase annually,[87] in order to obtain further health risk data and support

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[82] United States Environmental Protection Agency Press Office, "EPA Announces It Will Keep Maximum Contaminant Levels for PFOA, PFOS," May 14, 2025, https://www.epa.gov/newsreleases/epa-announces-it-will-keep-maximum-contaminant-levels-pfoa-pfos, and WFM Staff, "Senate confirms Kramer as EPA's Assistant Administrator for Water," Water Finance and Management, September 22, 2025, https://waterfm.com/senate-confirms-kramer-as-epas-assistant-administrator-for-water/.

[83] "Memorandum for the Environmental Protection Agency Office of Water," Liberty Counsel Action, accessed Aug. 2, 2026, https://abortioninourwater.org/PDFs/LCA/MemorandumtoEPAre-MifepristoneRegulations2026.pdf.

[84] United States Environmental Protection Agency Press Office, "Administrator Zeldin Announces Major EPA Actions to Combat PFAS Contamination," April 28, 2025, https://www.epa.gov/newsreleases/administrator zeldin-announces-major-epa-actions-combat-pfas-contamination.

[85] United States Environmental Protection Agency Press Office, "Trump EPA Announces Next Steps on Regulatory PFOA and PFOS Cleanup Efforts, Provides Update on Liability and Passive Receiver Issues," September 17, 2025, https://www.epa.gov/newsreleases/trump-epa-announces-next-steps-regulatory-pfoa-and-pfos-cleanup-efforts-provides.

[86] WFM Staff, "Senate confirms Kramer as EPA's Assistant Administrator for Water," Water Finance and Management.

[87] In the years since its original approval the use of the pill has steadily increased; see: Isaac Maddow-Zimet, Rachel K. Jones and Emma Stoskopf-Ehrlich, "Abortion in the United States," Guttmacher Institute; Rachel K. Jones and Amy Friedrich-Karnik, "Medication Abortion Accounted for 63% of All US Abortions in 2023—An Increase from 53% in 2020," Guttmacher Institute, March 2024, https://www.guttmacher.org/2024/03/medication-abortion-accounted-63-all-us-abortions-2023-increase-53-2020.

regulatory determinations, LCA believes it is vital that mifepristone and its active metabolites be added to the UCMR 6 this year. Failure to do so could delay critical occurrence monitoring and related risk assessment study. This recommendation is amply supported by peer-reviewed scientific data that indicates potential for public health concern. To that end, we respectfully request that the EPA consider the following regulatory and scientific background, analysis, and evidence demonstrating that mifepristone and its active metabolites should be on the UCMR and, ultimately, merit regulation.

Organizational Expertise

Having researched the issue extensively for over a year, LCA has developed subject matter expertise in this area. Our team has dedicated countless hours to reviewing numerous peer-reviewed scientific articles on this topic, researching government documents, consulting with wastewater treatment experts, and more; all of which culminated in the following:

- A 98-page white paper on the chemical abortion pill protocol detailing how its original approval violated federal law and presenting evidence that it likely contaminates our water.[88]
- A detailed memorandum to the EPA on specific actions the agency can take to mitigate the potential harms caused by the chemical abortion pill.[89]
- A letter to the FDA outlining the ways in which its most recent "major action" on the abortion drug mifepristone (approving a second generic version of it), like all its prior "major actions" on the abortion pill protocol, failed to properly adhere to environmental protection law.[90]
- Previous comments to the EPA and the Science Advisory Board's Drinking Water Committee on the CCL 6.[91]
- Multiple meetings with congressional offices, officials within the Trump administration's White House Domestic Policy Council, officials at the U.S. Food and Drug Administration, and officials within the EPA, including an in-person conversation with Administrator Lee Zeldin.

And more.[92]

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[88] "Abortion in Our Water: A Special Report," Liberty Counsel Action, accessed Aug. 2, 2026, https://lcaction.org/LCA-PDFs/AbortionInOurWater_Final01.pdf.
[89] "Memorandum for the Environmental Protection Agency Office of Water," Liberty Counsel Action, accessed Aug. 2, 2026, https://abortioninourwater.org/PDFs/LCA/MemorandumtoEPAre-MifepristoneRegulations2026.pdf.
[90] Letter to the United States Food and Drug Administration from Liberty Counsel Action, accessed Aug. 2, 2026, https://lcaction.org/PDFs/AIOW/LettertotheFDAonGenericApprovalofMifepristone_Fall2025.pdf.
[91] Both are available at AbortionInOurWater.org; see: https://abortioninourwater.org/PDFs/LCA/LCAComment_to_ScienceAdvisoryBoardCCL6AugmentedDrinkingWaterCommittee-June2026.pdf and https://lcaction.org/PDFs/LCA/LCAComment_USEPADraftCCL6_EPA-HQ-OW-2022-0946-May2026.pdf.
[92] Liberty Counsel Action staff have also participated in numerous radio and other media interviews on this topic, as well as prepared various resources for elected officials and the general public, which are available at www.AbortionInOurWater.org.

Background

U.S. Food and Drug Administration Oversight Hindered Proper Environmental Scrutiny of Mifepristone

Mifepristone and its active metabolites have never been properly studied for potential adverse environmental impact. First introduced into the U.S. market in 2000 after approval by the U.S. Food and Drug Administration (FDA), the abortion pill protocol's initial environmental review was not only substandard, but also lacked legal compliance (among other things), and no further environmental review has since been completed by the federal government.

Specifically, prior to its 2000 approval, the FDA considered an Environmental Assessment (EA) and issued a "finding of no significant impact" (FONSI) (rather than requiring further environmental analysis via an Environmental Impact Statement (EIS)[93]). However, there are some glaring issues with the FDA's decision-making process:

1. **Lack of Objectivity**
   The FDA's 1996 "Environmental Assessment and Finding of No Significant Impact" for mifepristone tablets lacked clear, independent environmental analysis. Instead, its assessment and findings relied heavily on the Environmental Assessment (EA) prepared by the drug applicant, the Population Council (submitted as part of the overall application seeking mifepristone's approval).[94]

   The Population Council is a pro-abortion organization whose founding had strong ties to the eugenics movement.[95] Any documentation prepared by this entity is inevitably going to lack

[93] Patrizia A. Cavazzoni, "U.S. Food and Drug Administration to Kristan Hawkins, President and Kristi Hamrick, Chief Media & Policy Strategist, Students for Life of America," Letter, January 15, 2025, https://downloads.regulations.gov/FDA-2023-P-1528-0005/attachment_1.pdf. Note: This letter clarifies a FONSI is "a determination by a Federal agency that a proposed agency action does not require the issuance of an environmental impact statement."

[94] "Environmental Assessment and Finding of No Significant Impact for NDA 20-687—Mifepristone Tablets," Food and Drug Administration Center for Drug Evaluation and Research, July 1996, https://www.accessdata.fda.gov/drugsatfda_docs/nda/2000/20687_Mifepristone_EA.pdf. According to said assessment, "[t]he product can be manufactured, used and disposed of without any expected adverse environmental effects."

[95] As outlined by Liberty Counsel, "*When the eugenics movement fell out of favor with the fall of Nazi Germany, John D. Rockefeller III in 1952 founded the Population Council as a means to still advance eugenic population control, but under different guises it still uses today such as 'reproductive health,' 'reproductive choice,' and 'family planning.' After decades of funding and researching population control programs, the Council received the patent to Mifepristone. The drug was developed by the French company Roussel-Uclaf, who later donated the rights to the drug to the Population Council after the company was unable to find a buyer. With an opportunity for an inexpensive and widespread abortifacient drug to further its mission, the Population Council facilitated clinical trials, obtained FDA approval in 2000, and identified a manufacturer. During the FDA approval process, the Population Council transferred the rights to produce and distribute Mifepristone (RU-486) to Danco Laboratories.*" See: "Abortion Pill Is a 'Tool of Modern-Day Eugenics'," Liberty Counsel, February 29, 2024, https://lc.org/newsroom/details/022924-abortion-pill-is-a-tool-of-modernday-eugenics-1. See also: Carole Novielli, "Former employee says eugenics-based Population Council and its donors are 'endemically racist'," Live Action, September 13, 2020, https://www.liveaction.org/news/eugenicspopulation-council-donors-endemically-racist.

objectivity, a requirement of the National Environmental Policy Act (NEPA), which makes clear that federal agencies are responsible for preparing statements on the environmental impact of "major Federal actions significantly affecting the quality of the human environment" and likewise ensuring the **objectivity** of such statements.[96] Instead of questioning the Population Council's objectivity by performing their own detailed EA, the FDA simply summarized and accepted the Population Council's EA.[97]

2. **Failure to consider the environmental fate of mifepristone's biological by-products from use (human fetal remains and related medical waste)**
   The FDA has never adequately addressed disposal pathways for the biological materials that are generated and typically flushed after use of mifepristone, nor (seemingly) considered how said materials (aborted human fetal remains and related medical waste) could impact wastewater systems, a violation of both the Clean Water Act (CWA) and the National Environmental Policy Act (NEPA).

   Specifically:
   - Based on the Population Council's EA, the FDA "determined that there would be no significant effects on the quality of the human environment," and "there was no information that indicated that extraordinary circumstances existed that would warrant the submission of additional environmental information."[98] However, there are clearly **extraordinary circumstances,** as this was the first time a pill was introduced with the intention of forcing a woman to expel the contents of her uterus. According to a 1998 guidance on the NEPA, these circumstances should have been considered (arguably prior to the 2000 approval, and most certainly in every year a subsequent "major action" was taken on the drug protocol).[99]

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[96] When the EA was performed, NEPA stated that, "*The procedures in this subparagraph shall not relieve the Federal official of his responsibilities for the scope, objectivity, and content of the entire statement or of any other responsibility under this chapter*." 42 U.S.C. §4332, 1995 Edition, https://www.govinfo.gov/content/pkg/USCODE-1995-title42/html/USCODE-1995-title42.htm. While said subparagraph is referring to detailed statements "for any major Federal action funded under a program of grants to States," this language nonetheless indicates Federal officials are meant to ensure the objectivity of environmental statements. For more on this, see section 1(B)(6) of Liberty Counsel Action's white paper, "Abortion in Our Water: A Special Report," accessed Aug. 2, 2026, https://lcaction.org/LCA-PDFs/AbortionInOurWater_Final01.pdf. Also of note, in 2023, NEPA was amended, making this requirement more explicit; it now states agencies shall "ensure the professional integrity, including scientific integrity, of the discussion and analysis in an environmental document." See: Office of the Law Revision Counsel, 42 U.S.C. §4332, accessed May 8, 2025, https://uscode.house.gov/view.xhtml?path=/prelim@title42/chapter55&edition=prelim.

[97] "Environmental Assessment and Finding of No Significant Impact for NDA 20-687—Mifepristone Tablets," Food and Drug Administration Center for Drug Evaluation and Research.

[98] Patrizia A. Cavazzoni, "U.S. Food and Drug Administration to Kristan Hawkins, President and Kristi Hamrick, Chief Media & Policy Strategist, Students for Life of America," Letter, January 15, 2025, https://downloads.regulations.gov/FDA-2023-P-1528-0005/attachment_1.pdf.

[99] To clarify what is included in extraordinary circumstances: A 1998 FDA guidance states, "[e]xtraordinary circumstance can be shown by data available either to the Agency or the applicant and can be based on the production, use, or disposal from use of the FDA-regulated article." In the case of mifepristone / Mifeprex®, a "disposal from use" of the FDA-regulated article would be necessary after the drug is used as intended (to end a pregnancy). Specifically, it requires the

- By failing to consider the "extraordinary circumstance" of aborted human fetal remains and related medical waste being expelled and therefore needing to be disposed of—in both its initial and subsequent "major actions" on the abortion drug protocol (at the very least a gross oversight if not negligence)—the FDA failed to address the possibility that "biological materials"[100] (aborted fetal remains) could contribute to pollutant loads (in part as they also would be contaminated with mifepristone and its active metabolites) or present challenges to wastewater treatment systems.[101] Likewise, the FDA failed to ensure that all state regulations related to medical waste disposal would be adhered to, as required by the CWA.[102]

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disposal (from use of the drug) of human remains from a pregnancy. This is, by definition, an "extraordinary circumstance" that should have been considered. Given disposition of aborted fetal remains was not properly considered prior to the drug's approval in 2000 (though, again, it should have been), this very explicit requirement also makes it inescapable that any exclusions allowing an exemption for an EA in subsequent years - the 2011, 2016, 2019, 2021, 2023, and 2025 approvals - should also not have applied. See: Environmental Assessment of Human Drug and Biologics Applications | Guidance for Industry," U.S. Department of Health and Human Services, Food and Drug Administration, Center for Drug Evaluation and Research Center for Biologics Evaluation and Research, July 1998, https://www.fda.gov/regulatory-information/search-fda-guidance-documents/environmental-assessment-human-drug-and-biologics-applications.

[100] According to the CWA, "Pollutant" is defined as "dredged spoil, solid waste, incinerator residue, sewage, garbage, sewage sludge, munitions, chemical wastes, **biological materials** . . . discharged into water." Fetal remains are biological materials that may be discharged into the water as a result of chemical abortion. See: Office of the Law Revision Counsel, 33 U.S.C. §1362(6), accessed May 30, 2025, https://uscode.house.gov/view.xhtml?path=/prelim@title33/chapter26&edition=prelim.

[101] While the FDA may argue that the medical waste generated under the original protocol was minimal (the original 2000 approval permitted abortion up to seven weeks gestation), even at that point, women could obtain the pills and take them later. Furthermore, in all subsequent major actions taken by the FDA, particularly those that permitted abortion at 10 weeks (2016) and removed the in-person dispensing requirement (2023), the reality that medical waste was being generated and therefore needed to be disposed of properly was not considered nor addressed, though as demonstrated, said consideration was legally required. See: "Letter to the Population Council," Center for Drug Evaluation and Research, September 28, 2000, https://www.accessdata.fda.gov/drugsatfda_docs/appletter/2000/20687appltr.pdf (original approval letter for the abortion pill protocol); "APPLICATION NUMBER: 020687Orig1s025 | Summary Review," Center for Drug Evaluation and Research, January 23, 2023, https://www.accessdata.fda.gov/drugsatfda_docs/summary_review/2023/020687Orig1s025SumR.pdf (summary of reasoning for removal of in-person dispensing requirement); and "Mifepristone Matters: The 'Abortion Pill' in the Balance," Center for Women's Health | Oregon Health & Science University, accessed April 19, 2026, https://www.ohsu.edu/womens-health/mifepristone-matters-abortion-pill-balance. Also of note, the 2011 REMS made this option explicit, as outlined by the American College of Obstetricians and Gynecologists, ". . . patients were not required to use mifepristone at the time it was dispensed in the clinician's office and could take it at home." American College of Obstetricians and Gynecologists, "Understanding the Practical Implications of the FDA's December 2021 and January 2023 Mifepristone REMS Decisions," *Advocacy and Health Policy*, https://www.acog.org/news/news-articles/2022/03/understanding-the-practical-implications-of-the-fdas-december-2021-mifepristone-rems-decision.

[102] The Clean Water Act states: "*Each department, agency, [e.g., the FDA] or instrumentality of the executive, legislative, and judicial branches of the Federal Government . . . engaged in any activity [e.g., drug approvals] resulting, or which may result, in the discharge or runoff of pollutants, and each officer, agent, or employee thereof in the performance of his official duties, shall be subject to, and comply with, all Federal, State, interstate, and local requirements, administrative authority, and process and sanctions respecting the control and abatement of water pollution in the same manner, and to the same extent as any nongovernmental entity including the payment of reasonable service charges. The preceding sentence shall apply (A) to any requirement whether substantive or procedural (including any recordkeeping or reporting requirement, any requirement respecting permits and any other requirement, whatsoever), (B) to the exercise of any Federal, State, or local administrative authority, and (C) to any process and sanction, whether enforced in Federal, State, or local courts or in any other manner*." Furthermore, according to the CWA, "Pollution" is defined as "*man-made or*

3. **Reliance on Estimated Introduction Concentration**
   The EA's conclusion that mifepristone and its active metabolites would not cause environmental harm was (at least in part) based on an *estimate* of what their concentration in water would be. **The estimate was never validated with real-world monitoring data, nor was there any study of the possible effect(s) mifepristone and its active metabolites may have on wildlife and humans if present in our water supply**, nor analysis of whether their presence in water would violate any state water quality laws.

   More specifically:

   - The 1996 EA notes "*Expected Introduction Concentration* [EIC] *from Use,"* is less than 1 part per billion (ppb). Highlighting this, the Biden-led FDA outlined that, "*The applicant* [Population Council] *submitted a Tier 0 EA,"* which, per a 1995 EA Guidance, *"is recommended when the EIC is estimated to be less than 1 ppb because FDA 'has routinely found that drugs at concentrations less than 1 ppb have no significant effect on relevant standard test organisms, and, therefore, are unlikely to have a significant effect on the environment.'"*[103] In other words, because the *estimated* introduction concentration was low, no further study was performed. While this was an inadequate conclusion even then (more on this below), it is even more inadequate today, as we now know that similar endocrine-disrupting chemicals (PFAS) may be harmful to human health in even lower doses over time—measured in *parts per trillion* (ppt).[104]

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*man-induced alteration of the chemical, physical, biological, and radiological integrity of water."** Placing fetal remains in the water supply and excreting active mifepristone metabolites could alter the biological integrity of the water, constituting pollution, and therefore should have been considered against all relevant laws (to ensure pollution prevention and compliance with said laws). **"Biological integrity" is defined by the EPA as "the condition of the aquatic community inhabiting unimpaired waterbodies of a specified habitat as measured by community structure and function."* See: Office of the Law Revision Counsel, 33 U.S.C. §1362, accessed May 30, 2025, https://uscode.house.gov/view.xhtml?path=/prelim@title33/chapter26&edition=prelim; United States Environmental Protect Agency, "Biological Criteria,"1990, https://www.epa.gov/sites/default/files/2018-10/documents/national-program-guidance-surface_waters.pdf. Finally, for more on this, see section 1: "Relevant Laws: The Clean Water Act, National Environmental Protection Act, and State Laws on Clean Water & Fetal Disposal" of Liberty Counsel Action's white paper, "Abortion in Our Water: A Special Report," Aug. 2, 2026, https://lcaction.org/LCA-PDFs/AbortionInOurWater_Final01.pdf.

[103] Patrizia A. Cavazzoni, "U.S. Food and Drug Administration to Kristan Hawkins, President and Kristi Hamrick, Chief Media & Policy Strategist, Students for Life of America," Letter, January 15, 2025, https://downloads.regulations.gov/FDA-2023-P-1528-0005/attachment_1.pdf.

[104] United States Environmental Protection Agency, "EPA's Per- and Polyfluoroalkyl Substances (PFAS) Action Plan," February 2019, https://www.epa.gov/sites/default/files/2019-02/documents/pfas_action_plan_021319_508compliant_1.pdf. See also: United States Environmental Protection Agency, "Per- and Polyfluoroalkyl Substances (PFAS) | Final PFAS National Primary Drinking Water Regulation," Updated May 18, 2026, https://www.epa.gov/sdwa/and-polyfluoroalkyl-substances-pfas. The latter source notes that the while the EPA is proposing modifications to prior National Primary Drinking Water Regulations on PFAS, said proposal upholds two Maximum Contaminant Levels (MCL, enforceable levels) for PFOA and PFOS, limiting them to 4.0 ppt, and allowing drinking water systems to request two additional years to comply.

- Even if the EIC was low, the FDA still should have considered state laws on water quality to ensure compliance with them, per the CWA.[105] Instead, the FDA (under the Clinton administration) stated the EA was submitted "in accordance with CDER [Center for Drug Evaluation and Research] guidance," which "**normally**" relieved the applicant from providing information on the "Fate of emitted substances in the environment" and "Environmental effects of released substances" (along with other further information) if the EIC was below a certain threshold.[106] However:
    - Guidance that allows the FDA to avoid complying with states' laws related to clean water, as is required by the CWA, should be considered invalid.
    - Moreover, there is nothing "**normal**" about mifepristone; this was the first drug introduced to the market that was both fatal in nature and generated aborted human fetal remains and medical waste, suggesting that even if "normally" the applicant would not need to provide further information on the environmental impact of it, **these are not normal circumstances and therefore warrant in-depth environmental study,** in addition to simple compliance with environmental law.

Current Environmental Analysis is Based on Outdated Data

While some may posit that the 1996 EA on mifepristone (based on the *predicted* concentration of the drug in water) was sufficient, given that in the years immediately following mifepristone's initial approval for use, most abortions continued to take place surgically (in 2001, drug-induced abortions accounted for approximately 6% of all abortions[107]), this does not justify the FDA's failure to adhere to environmental law and ignores the issue of fetal remains, as outlined above.

Furthermore, even if one accepts this argument, it is no longer the case: Drug-induced abortion now accounts for the vast majority of U.S. abortions. A conservative estimate suggests that as of this writing, approximately 700,000 of the over 1 million abortions performed annually are done via the abortion pill protocol.[108] Based on trends of mifepristone usage (indicating a steady rise in drug-induced abortions since mifepristone's original approval), this is only likely to increase. Consequently, the amount of mifepristone and its active metabolites entering our water is also only likely to increase.

This shift—current national use being substantially higher than when the 1996 environmental assessment was conducted—combined with other factors outlined in the analysis section, more than justifies including mifepristone and its active metabolites on UCMR 6, particularly given the

[105] See footnote 98.
[106] "Environmental Assessment and Finding of No Significant Impact for NDA 20-687—Mifepristone Tablets," Food and Drug Administration Center for Drug Evaluation and Research.
[107] Isaac Maddow-Zimet, Rachel K. Jones and Emma Stoskopf-Ehrlich, "Abortion in the United States," Guttmacher Institute.
[108] Ibid.

UCMR is in part used to inform future National Primary Drinking Water Regulations (NPDWR). Indeed, mifepristone and its active metabolites need updated governmental environmental exposure analysis based on empirical sampling rather than outdated modeling.[109]

(Of note: Increasing usage of mifepristone makes it a growing concern particularly given (1) conventional water treatment plants do not remove these types of contaminants, (2) mifepristone is not readily biodegradable,[110] and (3) it likely persists in the environment. More on these points in the analysis section.)

Analysis

Review of EPA's Selection Criteria for Contaminants for UCMR

The evidence below demonstrates that mifepristone and its active monodemethylated, didemethylated, and hydroxylated metabolites qualify for placement on the final UCMR 6 per the EPA's own selection criteria[111]:

1. To identify contaminants that (a) have not been "monitored under prior UCMR cycles" *(it has not been);* (b) "may occur in drinking water" *(it has been reported in U.S. drinking water)*; and (c) "are expected to have a completed, validated drinking water method in time for rule proposal" (*see the section above on analytical methods*).
2. To consider (a) "availability of health assessments or other health-effects information" (*there is data showing they are potent endocrine disruptors, outlined below),* (b) "public interest" *(numerous members of the public are interested in these contaminants*[112]), (c) "active use" *(use of mifepristone has increased steadily since its original approval by the FDA more than twenty years ago; a conservative estimate suggests approximately 700,000 women use this drug annually);* and (d) "availability of occurrence data" *(while, as noted, various studies have found mifepristone in environmental waters and there is a new study*

[109] Elena Humphreys, "Regulating Contaminants Under the Safe Drinking Water Act (SDWA)," Congress.gov, September 10, 2024, https://www.congress.gov/crs-product/R46652#fn20.
[110] "Nordic Drugs AB | Mifegyne, Tablet 200 mg," FASS, accessed February 20, 2026, https://fass.se/health/product/19920904000068. (*Under the heading "Environmental impact," one must click "see detailed environmental information." Google Translate was utilized to translate the text from Swedish to English*.) Please note: While other sources (listed below) state biodegradation data is not available for mifepristone, this merely underscores our recommendation for monitoring mifepristone and researching its possible adverse effects, given more information is clearly needed. See: National Center for Biotechnology Information, "PubChem Compound Summary for CID 55245, Mifepristone," PubChem, Retrieved June 2, 2025 from https://pubchem.ncbi.nlm.nih.gov/compound/Mifepristone; Sigma-Aldrich, "Safety Data Sheet," October 16, 2025, https://www.sigmaaldrich.com/US/en/sds/sigma/m8046; "Chemical Safety Data Sheet MSDS / SDS | Mifepristone," ChemicalBook, November 22, 2025, https://www.chemicalbook.com/msds/mifepristone.htm.
[111] U.S. Environmental Protection Agency, "Learn About the Unregulated Contaminant Monitoring Rule," June 18, 2026, https://www.epa.gov/dwucmr/learn-about-unregulated-contaminant-monitoring-rule.
[112] If one refines the comments posted on the EPA's Nonrulemaking Docket, "Drinking Water Contaminant Candidate List 6 (CCL 6)," with the keyword "mifepristone," there are 1,201 results—nearly half of the total number of comments posted (2,487). U.S. Environmental Protection Agency, Drinking Water Contaminant Candidate List 6 (CCL 6), accessed July 23, 2026, https://www.regulations.gov/docket/EPA-HQ-OW-2022-0946/comments?filter=mifepristone.

that reports its presence in U.S. drinking water, LCA is proposing that this is needed nationwide).

3. Finally, EPA notes it (a) "considers stakeholder input" (*see the high-profile stakeholder interest in mifepristone below);* (b) "looks at cost-effectiveness of the potential monitoring approaches" (*addressed above under "Cost Considerations Against the Current Landscape");* (c) "considers implementation factors (e.g., laboratory capacity)," and (d) "further evaluates health effects, occurrence, and persistence/mobility data" (*again, LCA proposes this is sorely needed).*

Moreover, it is highly likely that mifepristone and its active metabolites not only qualify for placement on UCMR 6 but also for a National Primary Drinking Water Regulation (NPDWR), as they meet most (if not all) of the criteria required "when making a determination to regulate."[113]

High-Profile Stakeholder Interest

Given the risk that mifepristone and its active metabolites pose to wildlife (from environmental exposure) and humans (from drinking water exposure), these contaminants present a great environmental and public health concern. Elected official representing substantial portions of the public share this concern, as demonstrated by comments submitted to the EPA urging inclusion of mifepristone on CCL 6 from:

- 16 Members of Congress,[114]
- 14 Attorneys General,[115] and
- Multiple public policy organizations.[116]

Together, these comments represent hundreds of thousands of individuals, suggesting the EPA would be undergirded by massive public support should it move forward on both listing these contaminants on the CCL 6 and monitoring these contaminants under the UCMR 6.

Organization of Analysis

Given that ultimately the UCMR is used to provide "the EPA and others with scientifically valid data on the occurrence of these contaminants in drinking water" permitting "assessment of the population being exposed and the levels of exposure," and that data from it is "**one of the primary**

[113] "How EPA Regulates Drinking Water Contaminants," United States Environmental Protection Agency, September 30, 2025, https://www.epa.gov/sdwa/how-epa-regulates-drinking-water-contaminants; see also: U.S.C. §300g–1, "National drinking water regulations," https://uscode.house.gov/view.xhtml?req=(title:42+section:300g-1+edition:prelim, and United States Environmental Protection Agency, "SDWA Evaluation and Rulemaking Process."

[114] Senator James Lankford, Representative Josh Brecheen, Representative Chris Smith et al., letter to the Honorable Lee Zeldin, Administrator, U.S. Environmental Protection Agency, June 5, 2026, https://chrissmith.house.gov/uploadedfiles/comment_letter_-_epa_draft_list_of_contaminants.pdf.

[115] Attorney General Catherine Hanaway et al., letter to the U.S. Environmental Protection Agency RE: Draft Sixth Contaminant Candidate List, June 5, 2026, https://www.alabamaag.gov/wp-content/uploads/2026/06/Missouri-Coalition-Letter-ISO-Adding-Mifepristone-to-CCL.pdf.

[116] Including Liberty Counsel Action, among others; for example, see the comment from the Ethics and Public Policy Center Re: Proposed Modification to List of Tracked Contaminants in Safe Drinking Water Act (SDWA), Docket ID Number EPA–HQ–OW–2022–0946, June 5, 2026, https://media.eppc.org/2026/06/EPPC-Comment-EPA-Contaminants.pdf.

sources of national occurrence data in drinking water that the EPA uses to inform regulatory and other risk management decisions for drinking water contaminants,"[117] the evidence below, demonstrating that mifepristone and its active metabolites should be placed on UCMR 6, is organized by the Safe Water Drinking Act's three criteria for **determining whether a contaminant merits regulation** (Regulatory Determination or the "RegDet Process"[118]):

> *(1) "the contaminant may have an adverse effect on the health of persons;"*
> *(2) "the contaminant is known to occur or there is a substantial likelihood that the contaminant will occur in public water systems with a frequency and at levels of public health concern; and"*
> *(3) "in the sole judgment of the Administrator, regulation of such contaminant presents a meaningful opportunity for health risk reduction for persons served by public water systems."*[119]

Point 1: *"The contaminant may have an adverse effect on the health of persons."*

Exposure Context: Americans Likely Consuming Trace Amounts of Mifepristone and Its Active Metabolites

Before outlining how Americans' health may be affected, one must first demonstrate that Americans may actually be consuming trace amounts of the chemical abortion pill mifepristone. In addition to the evidence presented in the peer-reviewed study "*Anti-Progesterone in Environmental Water*" that these compounds are in U.S. tap water,[120] the following facts also suggest this is the case:

- After ingestion, mifepristone is metabolized in the body and forms active metabolites,[121] which may retain the therapeutic effect of mifepristone[122] to obstruct the vital fertility hormone progesterone.[123] According to a 1997 scientific review article:

  > *"The 3 most proximal metabolites, namely the monodemethylated, didemethylated and hydroxylated metabolites of mifepristone, all retain considerable affinity toward the human progesterone and glucocorticoid receptors; in addition, the serum concentrations of these 3 metabolites are in a similar range as those of the parent drug."*[124]

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[117] U.S. Environmental Protection Agency, "Learn About the Unregulated Contaminant Monitoring Rule," June 18, 2026, https://www.epa.gov/dwucmr/learn-about-unregulated-contaminant-monitoring-rule.
[118] "SDWA Evaluation and Rulemaking Process," United States Environmental Protection Agency.
[119] Office of the Law Revision Counsel, 42 U.S.C. §300g-1.
[120] Elise Rose and Michael Varveris, "Anti-Progesterone in Environmental Water," *Issues in Law and Medicine | A Journal of the Alliance for Hippocratic Medicine*.
[121] Blake M. Autry and Roopma Wadhwa, "Mifepristone," National Library of Medicine, February 28, 2024, https://www.ncbi.nlm.nih.gov/books/NBK557612/.
[122] "Overview of Active Metabolites," Creative Proteomics, accessed December 19, 2025, https://www.creative-proteomics.com/resource/overview-of-active-metabolites.htm.
[123] Blake M. Autry and Roopma Wadhwa, "Mifepristone."
[124] Oskari Heikinheimo, "Clinical Pharmacokinetics of Mifepristone," Clinical Pharmacokinetics, Vol. 33, July 1997, https://link.springer.com/article/10.2165/00003088-199733010-00002. See also: Oskari Heikinheimo, Raimo Kekkonen,

In other words, the drug forms active compounds that retain "considerable" ability to do what the parent drug does: Block progesterone.

- Mifepristone and its active metabolites are eliminated from the body mainly via excretion (urine and feces),[125] they then pass into our wastewater systems. *(Of note, the EPA not only acknowledges that human excretion is a source of pharmaceuticals in the environment, but, per a 2019 rule on pharmaceuticals, it stated "pharmaceuticals are thought to be* ***primarily*** *entering the environment through excretion."*[126]) These substances can also enter our water systems via the medical waste and aborted human fetal remains that are often flushed down the toilet from a drug-induced abortion,[127] and from abortion pills being flushed down the toilet.
- The U.S. Geological Survey's (USGS) Water Science School corroborates the above, stating, "Many pharmaceutical drugs pass through the body and are excreted essentially unchanged."[128]
- Most conventional wastewater treatment plants are not designed to fully remove pharmaceutical contaminants (like mifepristone and its active metabolites).[129] The EPA

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and Pekka Lähteenmäki, "The pharmacokinetics of mifepristone in humans reveal insights into differential mechanisms of antiprogestin action," Contraception, December 2003, https://pubmed.ncbi.nlm.nih.gov/14698071/.

[125] N. N. Sarkar, "Mifepristone: bioavailability, pharmacokinetics and use-effectiveness," European journal of obstetrics, gynecology, and reproductive biology, Vol. 101, No. 2, March 10, 2002, https://www.ejog.org/article/S0301-2115(01)00522-X/fulltext. Specifically, this article states: "*Three metabolites of mifepristone have been identified. This compound undergoes demethylation to produce mono-demethylated (RU42633) and di-demethylated (RU42848) derivatives as well as hydroxylation of the propynyl group to yield hydroxylated metabolite (RU42698) . . . Like mifepristone, these metabolites are immunologically and biologically active and retain anti-progestational and anti-glucocorticoid properties. Elimination of mifepristone and its active metabolites from the body is mainly through feces (83%) and urine (8.8%) within 6–7 days after administration of a single oral dose*." Another source states, "*[t]he major route of excretion of Mifepristone and metabolites is via the faeces (83%) with 9% being excreted in the urine*," though there is "*uncertainty about the amounts metabolites excreted*." See: "Nordic Drugs AB | Mifegyne, Tablet 200 mg," FASS, accessed January 5, 2026 at https://fass.se/health/product/19920904000068. (Note: Under the heading "Environmental impact," one must click "see detailed environmental information." Google Translate was utilized to translate the text from Swedish to English.)

[126] "Management Standards for Hazardous Waste Pharmaceuticals and Amendment to the P075 Listing for Nicotine | Final rule," Environmental Protection Agency Federal Register, Vol. 84, No. 36, February 22, 2019, https://www.govinfo.gov/content/pkg/FR-2019-02-22/pdf/2019-01298.pdf.

[127] N C Hill et al., "Transplacental passage of mifepristone and its influence on maternal and fetal steroid concentrations in the second trimester of pregnancy," *BJOG: An International Journal of Obstetrics & Gynaecology,* Vol. 97, No. 5, May 1990, https://obgyn.onlinelibrary.wiley.com/doi/epdf/10.1111/j.1471-0528.1990.tb01827.x, which states, "Four hours after oral administration of 600 mg mifepristone, the drug was detected in both maternal and fetal circulations and in the amniotic fluid." See also: Paweł Szpot et al., "Determination of Mifepristone (RU-486) and Its active metabolites in Maternal Blood Sample after Pharmacological Abortion," *Molecules*, Vol. 27, No. 21, November 5, 2022, https://www.mdpi.com/1420-3049/27/21/7605, which states ". . . in this study metabolites of mifepristone were identified and quantified in the tested blood sample."

[128] Water Science School, "Pharmaceuticals move throughout the aquatic environment," U.S. Geological Survey, accessed October 24, 2025, https://www.usgs.gov/media/images/pharmaceuticals-move-throughout-aquatic-environment.

[129] "How Pharmaceuticals Enter the Environment," United States Environmental Protection Agency, Last modified January 22, 2026, https://www.epa.gov/household-medication-disposal/how-pharmaceuticals-enter-environment. See also: United States Environmental Protection Agency, "Primer for Municipal Wastewater Treatment Systems," September 2004, https://www.epa.gov/sites/default/files/2015-09/documents/primer.pdf. This states, *"Conventional Systems are wastewater treatment systems that have been traditionally used to collect municipal wastewater in sewers*

has specifically detailed how, "many [pharmaceuticals] pass through [Publicly Owned Treatment Works or POTWs] and enter the environment because POTWs are not designed to remove pharmaceuticals," going so far as to say, "[W]hile some POTWs may have implemented advanced treatment technologies, *even these technologies are not specifically designed to remove pharmaceuticals*."[130] The USGS Water Science School likewise states, "human pharmaceuticals and their metabolites often pass through sewage treatment plants."[131]

- Substantiating the above, myriad scientific studies confirm that pharmaceuticals are known to remain in source waters after treatment. For example, a 2012 study outlines:

  > *"Municipal wastewater treatment plants (WWTPs) are generally not equipped to deal with complex pharmaceuticals . . .* ***[the chemical and physical properties of] PhCs [pharmaceutical compounds] in raw wastewaters . . . vary greatly . . . with obvious repercussions on their behaviour during the treatments and consequently their removal efficiencies."*** [132] The study further underscores: **"*Observed removal efficiencies vary in a wide range for the different compounds, as well as for the same substance, due to the different chemical and physical characteristics of PhCs and to operational conditions"*** (emphasis added).

  This is particularly relevant with respect to the inclusion of the pharmaceutical "group" on the draft CCL 6. While, again, said group is a helpful first step, as the properties of individual pharmaceuticals vary greatly (meaning their possible presence in tap water and adverse effects on humans will also vary), certain ones arguably require greater scrutiny and therefore merit listing by name on CCL 6 and placement on the UCMR 6—mifepristone and its active metabolites chief among them. *(For more examples of studies outlining the presence of pharmaceuticals in our water, see Appendix 2.)*
- As documented by different scientific research articles, mifepristone has been detected in water bodies in other nations.[133] Related, a 2023 study referencing *"compounds that block human progesterone receptors"* states: *"Mifepristone is the best-known and most widely*

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and convey it to a central facility for treatment prior to discharge to surface waters. Either ***primary or secondary treatment may be provided in a conventional system****."* In other words, conventional WWTP / POTWs do not utilize advanced processes, which, per another source, is most of them: "*As of 2022, there were 17,544 publicly owned treatment works (POTWs) operating in the U.S. During that period, only 37.5 percent of them had advanced treatment processes in their plants*." Lucía Fernández, "Distribution of publicly owned wastewater treatment works (POTWs) in the United States as of 2022, by treatment level," Statista, November 28, 2025, https://www.statista.com/statistics/1473528/distribution-wastewater-treatment-plants-usa-by-type/. See also: United States Environmental Protection Agency, "2022 CWNS Data," accessed October 22, 2025, https://sdwis.epa.gov/ords/sfdw_pub/r/sfdw/cwns_pub/wastewater-dashboard?session=13714735319188.

[130] "How Pharmaceuticals Enter the Environment," United States Environmental Protection Agency.

[131] Water Science School, "Pharmaceuticals move throughout the aquatic environment."

[132] P. Verlicchi et al., "Occurrence of pharmaceutical compounds in urban wastewater: Removal, mass load and environmental risk after a secondary treatment—A review," *Science of The Total Environment,* Vol. 429, July 1, 2012, https://www.sciencedirect.com/science/article/pii/S0048969712005608?via%3Dihub. Another notable point: "*This review highlights the fact that the occurrence of some PhCs in the secondary effluent discharged into surface water bodies may pose a medium–high (acute) risk to aquatic life*."

[133] See the sub-section titled "Mifepristone's Presence Detected in Other Countries."

used representative of this class of substances . . . Most of these compounds are only partially removed in wastewater treatment plants and so residua end up in rivers, smaller streams, or ponds that are recipients of treatment plant effluents (Chen et al., 2014; Zhang et al., 2021).” [134]

- Most drinking water treatment plants are likewise not able to fully remove these sorts of active contaminants. [135] For example, a joint, two-phase U.S. Geological Survey-U.S. Environmental Protection Agency study found several pharmaceutical contaminants present in treated water, specifically detecting 26 different pharmaceuticals across 25 drinking water treatment plants.[136]

Taken together, the above bullet points lead to the logical conclusion that trace amounts of active mifepristone contaminants are reaching U.S. drinking water supplies, a claim that is, as noted, substantiated in the study *“Anti-Progesterone in Environmental Water.’’* (*For further details, see Point 2.)*

How Mifepristone May Adversely Affect Human Health: Endocrine Disruption

As noted above, mifepristone acts as an endocrine disruptor[137] by blocking the fertility hormone progesterone,[138] which is vital for men,[139] women,[140] and animals.[141]

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[134] Michal Pech et al., “Effects of mifepristone, a model compound with anti-progestogenic activity, on the development of African clawed frog (Xenopus laevis),” *Aquatic Toxicology*, Vol. 263, October 2023, https://www.sciencedirect.com/science/article/abs/pii/S0166445X23002965.

[135] Multiple sources confirm pharmaceuticals have been detected in U.S. drinking water; for examples, see: Saleh Taghvaeian, “Pharmaceuticals in Drinking Water,” OKState.edu, March 2017, https://extension.okstate.edu/fact-sheets/pharmaceuticals-in-drinking-water.html; Susan T. Glassmeyer et al., “Nationwide reconnaissance of contaminants of emerging concern in source and treated drinking waters of the United States,*” Science of the Total Environment*, December 2016, https://www.sciencedirect.com/science/article/pii/S0048969716326894. This article outlines that while the amount of pharmaceuticals present is typically reduced after treatment, some nevertheless remain present at low levels, including an antibiotic, hormone, and antidepressant.

[136] Edward T. Furlong et al., “Nationwide reconnaissance of contaminants of emerging concern in source and treated drinking waters of the United States: Pharmaceuticals,” *Science of The Total Environment*, Vol. 579, February 1, 2017, https://www.sciencedirect.com/science/article/abs/pii/S0048969716305551?via%3Dihub.

[137] Per the U.S. Department of Health National Institute of Environmental Health Sciences, “Endocrine-disrupting chemicals (EDCs) are natural or human-made chemicals that may mimic, block, or interfere with the body’s hormones, which are part of the endocrine system. These chemicals are associated with a wide array of health issues.” See: “Endocrine Disruptors and Your Health,” National Institute of Environmental Health Sciences, March 2023, https://www.niehs.nih.gov/sites/default/files/health/materials/endocrine_disruptors_508.pdf.

[138] Mayo Clinic Staff, “Medical Abortion,” Mayo Clinic, June 28, 2024, https://www.mayoclinic.org/testsprocedures/medical-abortion/about/pac-20394687; “Progesterone,” You and Your Hormones, March 2021, https://www.yourhormones.info/hormones/progesterone/.

[139] “Progesterone Therapy: Why Men Need This Vital Hormone Too!” Your Wellness Center, accessed January 22, 2026, https://yourwellnesscenter.com/blog/progesterone-therapy-why-men-need-this-vital-hormone-too/.

[140] “Progesterone and Pregnancy: A Vital Connection,” RESOLVE: The National Infertility Association, accessed January 22, 2026, https://resolve.org/learn/infertility-101/female-reproductive-system/progesterone-and-pregnancy/.

[141] Nicolae Tiberiu Constantin, Florin Petrișor Posastiuc and Crina Raluca Andrei, “Progesterone: An Essential Diagnostic Resource in Veterinary Medicine,” From the Edited Volume *Progesterone - Basic Concepts And Emerging New Applications*, May 12, 2024, https://www.intechopen.com/chapters/1187155; Maria F. Tyree and Claire Stenhouse, “Exogenous progesterone supplementation: a strategy to enhance conceptus development in sheep and pigs?”

Potential Adverse Impact on the General Population

While we are not aware of any comprehensive scientific study on the effect trace amounts of mifepristone and its active metabolites may have on human (or animal) health over a certain period of time (*adding to the urgent need that they be placed on CCL 6 and UCMR 6*), there is substantial evidence suggesting they are very likely to have an adverse effect.[142] Consider the following:

- Other water contaminants whose effect is similar to mifepristone; namely, potential endocrine-disrupting chemicals (EDCs), perhaps most notably perfluoroalkyl and polyfluoroalkyl substances (PFAS), are coming under extreme scrutiny from the environmental community[143] as exposure to them is linked to health harms.[144] Indeed, it is notable that one of the other chemical groups included on the Draft CCL 6 is a PFAS group and certain PFAS are on the proposed UCMR 6.
- The potential for EDCs to cause harm is demonstrated in numerous other scientific research studies and articles.[145] For example, a 2022 article in *Environmental Research* concludes:

Reproduction and Fertility, Vol. 6, No. 1, January 11, 2025, https://raf.bioscientifica.com/configurable/content/journals$002fraf$002f6$002f1$002fRAF-24-0092.xml.

[142] See section 4 of Liberty Counsel Action's white paper, "Abortion in Our Water: A Special Report," 2025, available at https://lcaction.org/LCAPDFs/AbortionInOurWater_Final01.pdf, "Impact of Emerging Contaminants: Pharmaceuticals and 'Forever Chemicals' in Our Environment Suggest Mifepristone Contamination Deserves Strict Scrutiny"; see also the following legislation recently introduced in Congress: "S.3460 - PFAS Accountability Act of 2025," Congress.gov, December 11, 2025, https://www.congress.gov/bill/119th-congress/senate-bill/3460/text.

[143] For example, see: "Wildlife and the environment | Endocrine disruptors," Chem Trust, accessed October 22, 2025, https://chemtrust.org/edcs-wildlife/; Manoj Kumar et al., "Environmental Endocrine-Disrupting Chemical Exposure: Role in Non-Communicable Diseases," Frontiers in Public Health, Vol. 8, September 23, 2020, https://www.frontiersin.org/journals/public-health/articles/10.3389/fpubh.2020.553850/full; and Andrea C. Gore et al., "Endocrine Disrupting Chemicals: Threats to Human Health | Pesticides, Plastics, Forever Chemicals, and Beyond," the Endocrine Society and International Pollutants Elimination Network (IPEN), February 2024, https://ipen.org/sites/default/files/documents/edc_report-2024-finalcompressed.pdf.

[144] The National Institute of Environmental Health Sciences summarizes the matter well: "the Endocrine Society and the European Society of Endocrinology have highlighted 'widespread scientific evidence' that exposure to endocrine-disrupting chemicals is harmful to human, animal, and ecological health." See: "Endocrine Disruptors and Your Health," National Institute of Environmental Health Sciences, March 2023, https://www.niehs.nih.gov/sites/default/files/health/materials/endocrine_disruptors_508.pdf.

[145] Examples of scientific research studies on the harms of Endocrine Disrupting Chemicals (EDCs):

- Jimoh O. Tijani et al., "Pharmaceuticals, endocrine disruptors, personal care products, nanomaterials and perfluorinated pollutants: a review," *Environmental Chemistry Letters,* Vol. 14, November 9, 2015, https://link.springer.com/article/10.1007/S10311-015-0537-Z. This article states, "*The presence of emerging micropollutants such as pharmaceuticals, endocrine disruptors, personal care products, nanomaterials and perfluorinated substances in the environment remains a great threat to the health and safety of humans and aquatic species. These micropollutants enter the environment via anthropogenic activities and have been detected in surface water, groundwater and even drinking water at nanogram per litre to microgram per litre concentration*." It goes on to outline, *"it has been established that continuous exposure to endocrine disruptors might result in serious transgenerational health effects on humans and wildlife, if care is not taken (Dmitruk et al. 2008; Fatoki and Opeolu 2009; Ferraz et al. 2007). It is therefore of paramount importance to understand the sources, pathways and the associated risk of exposure so as to prevent short- and long-term health implications. . . Today, several reviews and published articles have confirmed the presence of endocrine disrupting pharmaceuticals in the environment (Bu et al. 2013; Dalvie et al. 2014; Olujimi et al. 2010, 2012; Manickum and John 2014; Petrie et al. 2015; Sauvé and Desrosiers 2014)."*

> *"The studies summarized within this publication reinforce the concept* ***that reproduction in wildlife and humans can be significantly impacted negatively by human-made chemicals****, many of which act by altering the function of the endocrine system . . . Other ligand activated receptors* ***including progesterone****, retinoid and aryl hydrocarbon* ***receptors*** *represent molecular targets that* ***are uniquely sensitive to disruption by environmental chemicals.****"*[146]

As the progesterone receptor is already "sensitive to disruption by environmental chemicals" **and mifepristone works by binding to this receptor to block progesterone**,[147] if mifepristone is ingested—even in the small amounts that may be present in our water—one may logically conclude harm is likely to occur.

- Lata Ramrakhiani, Sourja Ghosh, & Swachchha Majumdar, "Emerging Contaminants in Water and Wastewater: Remediation Perspectives and Innovations in Treatment Technologies," Springer Nature, May 25, 2022, https://www.researchgate.net/publication/360849479_Emerging_Contaminants_in_Water_and_Wastewater_Remediation_Perspectives_and_Innovations_in_Treatment_Technologies. This study states: ***"[a]ll ECs are potential hazardous materials of ecosystem affecting the quality of freshwater . . . Exposure of such contaminants and its bioaccumulation can induce endocrine disruption, congenital disorders, mutagenesis and carcinogenesis, etc. on human health***." (Emphasis added.) These ECs "*involve a wide variety of compounds including pharmaceuticals (veterinary and human drugs) . . . etc*." (emphasis added) and enter the aquatic ecosystem (where water is drawn from to supply drinking water, irrigate crops, and more) principally via "*municipal and industrial Wastewater Treatment Plants (WWTP) that treat domestic sewage, wastewater from hospital, chemical manufacturing plants, livestock and agriculture*."
- Teresa A. Donovan, "Musing Aloud," Research Gate, August 2015, https://www.researchgate.net/publication/281101224_Musing_aloud, which references other studies highlighting the adverse impacts of various estrogens (which act as EDCs); for example, "*Bhandari and colleagues (2015) found that exposure to environmentally relevant quantities of ethinyl estradiol—commonly contained in most oral contraceptive regimens—led to reduced fertility rates and increased embryo mortality in a model fish population. Moreover, adverse impacts on population health persisted in offspring three generations later*."
- William V Williams et al., "Hormonally Active Contraceptives, Part II: Sociological, Environmental, and Economic Impact," The Linacre Quarterly, Vol. 88, No. 3, April 21, 2021, https://journals.sagepub.com/doi/10.1177/00243639211005121. This study highlights that "*Even at low concentrations (King et al. 2016, 1378–85), these compounds [synthetic progestogens and synthetic estrogens] can act as potent endocrine disruptors, affecting the growth, development, and reproduction of exposed aquatic organisms (Tyler, Jobling, and Sumpter 1998, 319–61; Larsson et al. 1999, 91–97).*"
- Concetta Pironti, et al., "Endocrine-Disrupting Compounds: An Overview on Their Occurrence in the Aquatic Environment and Human Exposure," *Water*, May 11, 2021, https://www.mdpi.com/2073-4441/13/10/1347. This study on the wider matter of endocrine disrupting chemicals found, "*Endocrine-disrupting compounds (EDCs) as emerging contaminants have accumulated in the aquatic environment at concentration levels that have been determined to be significant to humans and animals. Several compounds belong to this family, from natural substances . . . to synthetic chemicals, especially pesticides, pharmaceuticals, and plastic-derived compounds (phthalates, bisphenol A). . . Several studies correlate human exposure to high concentrations of EDCs with serious effects such as infertility, thyroid dysfunction, early puberty, endometriosis, diabetes, and obesity."* The study also notes, "*many EDCs are not degraded enough by the available microorganisms [to remove them from the water].*"

[146] V.L. Marlatt et al, "Impacts of endocrine disrupting chemicals on reproduction in wildlife and humans," Environmental Research, Vol. 208, May 15, 2022, https://www.sciencedirect.com/science/article/pii/S0013935121018855.

[147] Carolina J. Abboud, "The Development of Mifepristone for Use in Medication Abortions," Arizona State University | Embryo Project Encyclopedia, August 7, 2017, https://embryo.asu.edu/pages/development-mifepristone-use-medication-abortions; Margaret W. Beal and Kathy Simmonds, "Clinical uses of mifepristone: an update for women's health practitioners," *Journal of Midwifery & Women's Health,* Vol. 47, No. 6, November-December 2002, https://www.sciencedirect.com/science/article/abs/pii/S1526952302003318.

- In a 2008 agency document, the EPA noted that even though the "potential effects on public health and aquatic life" from pharmaceuticals "at the extremely low levels observed in drinking water and surface water" are uncertain, "concerns include hormone disruption, antibiotic resistance, and synergistic effects from the mixtures of various pharmaceutical compounds present in water."[148] The same agency document (an Interim Technical Report on the management and disposal of unused pharmaceuticals) goes on to state that ". . . the effects of discharges of pharmaceuticals on aquatic life can include subtle and gradual effects," such as disruption in hormones that may affect growth, reproduction, and development.[149]

Potential Adverse Impact on Sensitive Subpopulations

The following evidence suggests mifepristone tainted water is likely to have a particularly adverse effect on certain "*sensitive subgroups that comprise a meaningful portion of the general population,*" including "*infants, children, pregnant women*," and arguably may have already had an adverse effect on "*individuals with a history of serious illness*," [150] such as those suffering from long-term infertility. These groups are all at "*greater risk* [than the general population] *of adverse health effects due to exposure to contaminants in drinking water*"—like mifepristone and its active metabolites.[151]

1. **Developing children, including fetuses,** may be harmed by ingestion (in the case of a fetus, ingestion by a mother) of mifepristone-tainted water, **even in small doses**.

   By way of background, while the following may be obvious, it warrants explicit reference: Mifepristone was designed and approved by the FDA to end the life of a developing fetus; it does so by blocking a hormone vital to pregnancy (progesterone). As such it is the only FDA-approved drug that is lethal in purpose. Furthermore, per the environmental impact information on mifepristone from FASS, *"[M]ifepristone should be considered toxic according to the PBT [Persistence, Bioaccumulation, Toxicity] criteria*." The same environmental data specifically outlines that mifepristone is "*classified as potentially toxic for reproduction (category 1) according to the CLP Regulation EC No 1272/2008.*"[152] Related,

[148] "Health Services Industry Study Management and Disposal of Unused Pharmaceuticals (Interim Technical Report)," U.S. Environmental Protection Agency, August 2008, https://downloads.regulations.gov/EPA-HQ-OW-2006-0771-1694/content.pdf.
[149] Ibid.
[150] "Drinking Water Contaminant Candidate List 6-Draft," 91 Fed. Reg. 17186; Apr. 6, 2026, https://www.federalregister.gov/documents/2026/04/06/2026-06662/drinking-water-contaminant-candidate-list-6-draft.
[151] Ibid.
[152] "Nordic Drugs AB | Mifegyne, Tablet 200 mg," FASS. See also "Regulation (EC) No 1272/2008 - classification, labelling and packaging of substances and mixtures (CLP)," *European Agency for Safety and Health at Work,* updated March 14, 2024, https://osha.europa.eu/en/legislation/directives/regulation-ec-no-1272-2008-classification-labelling-and-packaging-of-substances-and-mixtures, which states "The CLP Regulation establishes uniform requirements for the classification, labelling and packaging of chemical substances and mixtures, with the aim of ensuring a high level of protection of human health and the environment, as well as the free movement of substances, mixtures and articles."

the "Serious Warnings and Precautions" section of a product information document on the drug states, "*[P]atients should be counselled that once the treatment is started, there are risks of embryotoxicity if the pregnancy is not terminated. Both* ***mifepristone*** *and misoprostol are* ***embryotoxic and have been associated with fetal abnormalities****.*"[153]

Combined with the evidence above outlining exposure pathways, it is reasonable to be concerned that pregnant women may be ingesting trace amounts of this embryotoxic substance over time, and that said exposure may pose a risk of harm to their developing fetuses.

Consider as well that under the last two administrations, the EPA has investigated and taken action to address PFAS, which, like mifepristone, act to disrupt the endocrine system (as noted above). Specifically, an EPA "Action Plan" on PFAS published during the first Trump administration notes that, *"[d]epending on the PFAS, increased risks observed in some animal studies include developmental effects to fetuses during pregnancy and infants (e.g., low birth weight, altered puberty, skeletal variations)."*[154] Similarly, as outlined by the Biden-era EPA, PFAS "*can cause cancer and other illnesses*" and "*result in adverse health impacts*" at critical developmental stages, e.g., pregnancy or early childhood, after long-term exposure.[155] These findings have led to numerous steps being taken to combat PFAS contamination in our water **even though the amount of the substances in the water is minimal, measured in parts per trillion [ppt].**[156]

Not only does mifepristone, like PFAS, act as an endocrine disruptor, it is also potent in relatively small doses (as many pharmaceuticals are). Again, this suggests low-dose exposure to mifepristone and its active metabolites over long periods has the potential (like low-dose chronic exposure to PFAS) to adversely affect sensitive subpopulations.

2. Likewise, **men and women of childbearing age** may be harmed or may have already been harmed (e.g., those suffering from infertility) by long-term ingestion of mifepristone and its active metabolites, even if in trace amounts. Given the parent drug is designed to block a

[153] Linepharma International Limited, Mifegymiso: Product Monograph Including Patient Medication Information, November 6, 2017, https://pdf.hres.ca/dpd_pm/00042012.PDF.
[154] "EPA's Per- and Polyfluoroalkyl Substances (PFAS) Action Plan," United States Environmental Protection Agency, February 2019, https://www.epa.gov/sites/default/files/2019-02/documents/pfas_action_plan_021319_508compliant_1.pdf.
[155] "Biden-Harris Administration Finalizes First-Ever National Drinking Water Standard to Protect 100M People from PFAS Pollution," United States Environmental Protection Agency, April 10, 2024, https://www.epa.gov/newsreleases/biden-harris-administration-finalizes-first-ever-national-drinking-water-standard.
[156] "EPA's Per- and Polyfluoroalkyl Substances (PFAS) Action Plan," United States Environmental Protection Agency, February 2019, https://www.epa.gov/sites/default/files/2019-02/documents/pfas_action_plan_021319_508compliant_1.pdf.

hormone (progesterone) needed for effective reproduction (as noted above)[157] and its active metabolites retain that same therapeutic effect, these contaminants could very well be a contributing cause of experienced infertility.

Indeed, consider how common it is for women to require progesterone supplementation both in order to conceive and remain pregnant. In 2024 alone, over 1.6 million Americans were prescribed progesterone for various therapeutic uses, including fertility support.[158] Notably, this likely represents only a fraction of those who could benefit from it,[159] particularly when one considers that globally, 1 in 6 individuals experience infertility in their lifetime,[160] and in the U.S., 1 in 5 married women of childbearing age (15 to 49) "with no prior births are unable to get pregnant after 1 year of trying."[161] Based on this alone, determining whether mifepristone water contamination is contributing to infertility should be a top priority.

Underscoring this point, a recent research article, "Impacts of endocrine disrupting chemicals on reproduction in wildlife and humans," highlights that exposure to endocrine-disrupting chemicals (EDCs) (like mifepristone and its active metabolites) "is identified as a significant risk factor for decreased fertility in wildlife and humans."[162] It goes on to outline:

> *"[T]here is great need to better* ***monitor human exposure levels to EDCs and establish how this contributes to*** *the increasing incidences of disorders of the reproductive tract and* ***declining fertility rate in both women and men****. . . Studies over the last 50 years have shown that many different classes of chemicals can function as EDCs . . . many pharmaceuticals . . . act as EDCs."*[163]

Given that mifepristone is a pharmaceutical known to act as an EDC, it certainly warrants inclusion in any **monitoring** efforts, including monitoring via the UCMR 6, that may assist in establishing how EDCs may harm human health. The same study also states,

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[157] Mayo Clinic Staff, "Medical Abortion," Mayo Clinic.
[158] Sarah Daccarett, "17 Progesterone Imbalance Statistics Every Woman Should Know in 2026," *Inner Balance,* January 8, 2026, https://www.innerbalance.com/p/learn/progesterone-imbalance-statistics; Progesterone and Fertility Common Questions, Fertility Centers of Illinois, March 22, 2022, https://www.fcionline.com/article/progesterone-and-fertility-common-questions/; Lauren Kim,"Do Women Take Progesterone to Get Pregnant? Understanding Progesterone's Role in Fertility," Advance Study, April 4, 2026, https://advancestudy.org/do-women-take-progesterone-to-get-pregnant/.
[159] Sarah Daccarett, "17 Progesterone Imbalance Statistics Every Woman Should Know in 2026," *Inner Balance*.
[160] "1 in 6 people globally affected by infertility: WHO," World Health Organization, April 4, 2023, https://www.who.int/news/item/04-04-2023-1-in-6-people-globally-affected-by-infertility.
[161] U.S. Centers for Disease Control and Prevention, "Infertility: Frequently Asked Questions," May 15, 2024, https://www.cdc.gov/reproductive-health/infertility-faq/index.html#cdc_generic_section_2-is-infertility-a-common-problem.
[162] V.L. Marlatt et al, "Impacts of endocrine disrupting chemicals on reproduction in wildlife and humans," Environmental Research.
[163] Ibid.

> "*There is now evidence of sensitive timing of exposure, more specifically during development, which underlines the importance of identifying populations at risk from a biological point of view (i.e., pregnant women and the foetus, newborn) . . . Perhaps the ultimate factor in reducing the risks posed by EDCs will be to reduce exposure, and this might be achieved through improved public awareness and vigilant product* ***stewardship****."*[164]

Given the lack of studies on the effects of long-term, low-dose exposure to mifepristone and its active metabolites, and the clear risk mifepristone poses to human health and fertility, proper "**stewardship**" of it requires (at the least) gathering more information.

A final point: Several scientific studies on the effects that mifepristone exposure has on wildlife (noted in the "Mifepristone's Threat to the Aquatic Environment" section below) detail adverse reproductive effects. This research should lead to both further studies on said wildlife and on whether humans may suffer similar harms.

Concluding Point 1

The above plausible exposure pathways and endocrine disruption activity of mifepristone and its active metabolites make clear that they may have an adverse effect on human health, satisfying criterion 1, and supporting an EPA listing on UCMR 6. Indeed, the environmental risks this drug and its active metabolites pose to human and animal health deserve immediate attention, particularly in light of the nation's infertility crisis.[165] It cannot be said enough that the evidence clearly points to an urgent need to determine whether Americans are ingesting mifepristone chemicals at levels that warrant regulatory action.

Point 2: *"The contaminant is known to occur or there is a substantial likelihood that the contaminant will occur in public water systems with a frequency and at levels of public health concern."*

Mifepristone is known to occur in public water systems in the U.S.,[166] and it is highly likely its active metabolites are also contaminating our public water systems, as outlined under the exposure pathways section in Point 1. The known levels are indeed a public health concern. To summarize:

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[164] V.L. Marlatt et al, "Impacts of endocrine disrupting chemicals on reproduction in wildlife and humans," Environmental Research.

[165] "RFK Jr Sounds Alarm on U S Health Crisis "Our Children Are in Trouble," YouTube, April 8, 2025, https://www.youtube.com/shorts/shX_OHfg1Wo; Brady E. Hamilton, Ph.D., Joyce A. Martin, M.P.H., and Michelle J.K. Osterman, M.H.S., "Vital Statistics Rapid Release | Births: Provisional Data for 2024," National Vital Statistics System, No. 38, April 2025, https://www.cdc.gov/nchs/data/vsrr/vsrr038.pdf.

[166] Elise Rose and Michael Varveris, "Anti-Progesterone in Environmental Water," *Issues in Law and Medicine | A Journal of the Alliance for Hippocratic Medicine*.

- Mifepristone and its active metabolites enter our wastewater systems via urine, feces, and the blood and related medical waste expelled by women during chemical abortions (which is also often flushed into our water systems), or via disposing of unwanted or leftover pills down the toilet. Traditional water treatment plants are not designed to remove these types of contaminants.
- Multiple studies by researchers from around the globe demonstrate there are numerous pharmaceuticals in both supply and drinking waters,[167] and pharmaceuticals have specifically been detected in U.S. drinking water,[168] (now) including mifepristone.[169]

As it pertains to whether the levels of mifepristone in the U.S. (and globally[170]) warrant public health concern, the answer is a resounding yes. As outlined in the executive summary, in Austin, Texas, researchers found mifepristone levels as high as 39 parts per trillion (ppt) with an average of 16.1 ppt across four municipal tap water samples.[171] In Carbondale, Illinois, the average level of mifepristone across four municipal tap water samples was 2.6 ppt, with the highest level measured at 3.5 ppt.[172] When one considers the EPA set the maximum contaminant levels for certain other endocrine disruptors, the long-lasting "forever chemicals" PFOA and PFOS, at 4 ppt, and that this study did not test for active metabolites—meaning contamination from the abortion pill may be higher than these initial findings in Texas and Illinois—the concentration of these persistent contaminants is likely at a level warranting regulatory action. In these cities, and likely other cities with similar profiles (urban and/or with "moderate populations of women of child-bearing age"[173]), action is urgently needed.

In addition, mifepristone is not readily biodegradable and may bioaccumulate in the environment. When one combines all these factors with the reality that the use of the abortion pill protocol in abortion procedures has risen dramatically over time, with at least 65% of the over 1 million abortions that occurred in 2023 taking place via the use of pills *(a number that is likely much higher given women's access to mifepristone and misoprostol online, the lack of reporting requirements related to chemical abortion, and the upward trend in usage*[174]),[175] one can logically conclude there

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[167] For example, see: Zvanaka Mazhandu and Tebogo Mashifana, "Active pharmaceutical contaminants in drinking water: myth or fact?" DARU Journal of Pharmaceutical Sciences, September 18, 2024, https://link.springer.com/article/10.1007/s40199-024-00536-9. See also further studies in Appendix 2.
[168] See footnote 132.
[169] Elise Rose and Michael Varveris, "Anti-Progesterone in Environmental Water," *Issues in Law and Medicine | A Journal of the Alliance for Hippocratic Medicine*.
[170] See the subsection titled "Mifepristone's Presence Detected in Other Countries."
[171] Elise Rose and Michael Varveris, "Anti-Progesterone in Environmental Water," *Issues in Law and Medicine | A Journal of the Alliance for Hippocratic Medicine*.
[172] Ibid.
[173] Elise Rose and Michael Varveris, "Anti-Progesterone in Environmental Water," *Issues in Law and Medicine | A Journal of the Alliance for Hippocratic Medicine*.
[174] "U.S. chemical abortions as a result of telehealth rise by 25%, report finds," U.S. Senator Cindy Hyde-Smith, March 27, 2026, https://www.hydesmith.senate.gov/us-chemical-abortions-result-telehealth-rise-25-report-finds.
[175] Isaac Maddow-Zimet, Rachel K. Jones and Emma Stoskopf-Ehrlich, "Abortion in the United States," Guttmacher Institute. *Note: The year after the pill was first approved, only 6% of all abortions took place via mifepristone; this grew steadily over time.*

is "*a substantial likelihood that the contaminant . . . occur[s] in public water systems* ***with a frequency and at levels of public health concern,"*** as evidenced below.

Mifepristone's Synthetic Makeup, Slow Degradation, Pseudo-Persistence & Potential to Bioaccumulate

A study on pharmaceuticals generally found that, "*[S]imilar to the perceived harmful effects of plastic waste on humans and marine life,* ***pharmaceuticals can be resistant to degradation, persistent pollutants in water bodies, lipophilic or water-soluble, and can be taken up by biota and bioaccumulate.***"[176] Based on the following evidence, mifepristone is likely to be one of these pharmaceuticals.

Mifepristone's Synthetic Makeup is Cause for Concern

Mifepristone is a synthetic compound,[177] which is notable given that other synthetic endocrine-disrupting compounds, PFAS, "**persist through wastewater treatment** at levels that may impact the long-term feasibility of 'beneficial reuse of treated wastewater.'"[178]

Again, most wastewater treatment plants are not designed to fully remove active pharmaceutical contaminants,[179] and certain synthetic chemicals (per the above), fall into that same category. Mifepristone is both (a pharmaceutical and synthetic). Moreover, a study published in 2019 highlights that, "*There is a growing and global concern about synthetic organic chemicals detected in waters . . . Several of these compounds are released into rivers, lakes, and seas and exhibit bioaccumulation and endocrine disrupting activity, with a consequent alteration of the reproductive capacity of many aquatic species*."[180] This same study outlines that, *"Among the most active endocrine disruptors found in the aquatic environment, there are natural and synthetic steroid*

[176] See: Zvanaka Mazhandu and Tebogo Mashifana, "Active pharmaceutical contaminants in drinking water: myth or fact?".
[177] Blake M. Autry and Roopma Wadhwa, "Mifepristone," National Library of Medicine; "HIGHLIGHTS OF PRESCRIBING INFORMATION | Mifepristone Tablets," The U.S. Food and Drug Administration.
[178] Pennsylvania State University, "'Forever Chemicals' Persist through Wastewater Treatment, May Enter Crops," *Phys.org*, October 26, 2022, https://phys.org/news/2022-10-chemicals-persist-wastewater-treatment-crops.html.
[179] "Primer for Municipal Wastewater Treatment Systems," United States Environmental Protection Agency, September 2004, https://www.epa.gov/sites/default/files/2015-09/documents/primer.pdf. Specifically, "*Conventional Systems are wastewater treatment systems that have been traditionally used to collect municipal wastewater in sewers and convey it to a central facility for treatment prior to discharge to surface waters. Either primary or secondary treatment may be provided in a conventional system*." Per another source, "*As of 2022, there were 17,544 publicly owned treatment works (POTWs) operating in the U.S. During that period, only 37.5 percent of them had advanced treatment processes in their plants. Advanced treatment aims to reduce or eliminate impurities below what is attainable through more conventional secondary treatment, for example, ozone treatment, membrane bioreactors, and ultraviolet processes*." Lucía Fernández, "Distribution of publicly owned wastewater treatment works (POTWs) in the United States as of 2022, by treatment level," Statista, November 28, 2025, https://www.statista.com/statistics/1473528/distribution-wastewater-treatment-plants-usa-by-type/.
[180] Adele Fabbrocini et al., "Mifepristone affects fertility and development in the sea urchin Paracentrotus lividus," *Molecular Reproduction and Development*, January 13, 2019, https://onlinelibrary.wiley.com/doi/full/10.1002/mrd.23112.

hormones"—mifepristone is a synthetic steroid that acts as an antiprogestin[181] (also referred to as an antiprogesterone[182])—***"but relatively little is known about the chemicals that interact with the progesterone pathway*** [like mifepristone]."[183]

At the very least this suggests more study on the progesterone-blocking effects of mifepristone in the environment is warranted, and indeed, further evidence below suggests that it is highly probable that mifepristone is among those synthetic chemicals that can **alter the "reproductive capacity" of wildlife—and likely humans**.

Mifepristone is Slow to Biodegrade

Adding to concerns that mifepristone and its active metabolites enter our water post-treatment at conventional WWTP, an aerobic biodegradation study in water found mifepristone is not readily biodegradable; rather, mifepristone "can be considered as slowly degraded in the environment"[184] (*other sources note biodegradation data is not available for mifepristone*[185]). Specifically, the environmental information on mifepristone from a Swedish drug information service found mifepristone can last several days in water and even longer in sediments *(below, DT50 and DT90 refer to dissipation or disappearance times; namely, how long it takes for the initial concentration of a test chemical, in this case mifepristone, to "dissipate;" that is, reduce, by 50 percent and 90 percent, respectively*[186]):

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[181] Louisa Laue et al., "The antiglucocorticoid and antiprogestin steroid RU 486 suppresses the adrenocorticotropin response to ovine corticotropin releasing hormone in man," *The Journal of Clinical Endocrinology & Metabolism*, Vol. 66, No. 2, February 1, 1988, https://pubmed.ncbi.nlm.nih.gov/2828406/. See also: "Antiprogestin," Science Direct, accessed January 22, 2026, https://www.sciencedirect.com/topics/chemistry/antiprogestin; Blake M. Autry and Roopma Wadhwa, "Mifepristone," National Library of Medicine; "Mifepristone," DrugBank, updated February 6, 2026, https://go.drugbank.com/drugs/DB00834.

[182] National Library of Medicine | National Center for Biotechnology Information, "Compound | Mifepristone," PubChem, accessed January 22, 2026, https://pubchem.ncbi.nlm.nih.gov/compound/Mifepristone#section=Drug-Indication.

[183] Adele Fabbrocini et al., "Mifepristone affects fertility and development in the sea urchin Paracentrotus lividus," *Molecular Reproduction and Development*.

[184] "Nordic Drugs AB | Mifegyne, Tablet 200 mg," FASS. This environmental impact analysis also states, *"In an aerobic biodegradation study (28 days) in water Mifepristone was not considered as readily biodegradable*." Note: Critics may highlight that the same Swedish source also states, *"mifepristone is not classified as a persistent compound*," arguing that mifepristone's eventual biodegradation (even if slow) renders it harmless. However, stating this conclusively would be a misinterpretation. Consider, for example, the 2024 study referred to above that found that though most pharmaceuticals *"are not highly persistent, continuous addition of the parent PPCPs [pharmaceuticals and personal care products] and their metabolites to the environment in small notable amounts, has led to their being considered as 'pseudo-persistent'*," and, given *"they are biologically active even at low concentrations . . . their presence in treated drinking water may pose a significant threat to the drinking water quality."* See: Kimberly Etombi Muambo et al., "Pharmaceuticals in raw and treated water from drinking water treatment plants nationwide: Insights into their sources and exposure risk assessment," Water Research X. Also of note, "*despite the global increase in the manufacture, consumption, and environmental discharge of [pharmaceuticals and personal care products or, PPCPs], for a vast majority, there has been no environmental regulations*," including for the lethal mifepristone.

[185] See footnote 106.

[186] Organisation for Economic Co-operation and Development, "Test Guideline No. 308: Aerobic and Anaerobic Transformation in Aquatic Sediment Systems," OECD Guidelines for the Testing of Chemicals, June 25, 2025, https://www.oecd.org/content/dam/oecd/en/publications/reports/2002/04/test-no-308-aerobic-and-anaerobic-transformation-in-aquatic-sediment-systems_g1gh2d86/9789264070523-en.pdf.

> *"Mifepristone was exposed to two aerobic biologically active sediment systems (sediment A: high organic matter; sediment B: low organic matter). According to results, the DT50/DT90 values for Mifepristone are 4.5/14.9 days (water phase), 72.1/239.0 days (sediment phase) and 14.3/212.0 days (total system) for sediment system A and 4.1/13.5 days (water phase), 29.6/98.4 days (sediment phase) and 12.7/42.3 days (total system) for sediment system B."*

It concludes, noted above, that "as the DT50 values are ≤ 72.1 days, Mifepristone can be considered as slowly degraded in the environment."[187] As also shown by the data, it took 13.5-14.9 days for mifepristone to reduce by 90 percent in water, and much longer —up to 239 days— to reduce by 90 percent in sediments. As it is constantly being re-added to the environment, there is clear likelihood of pseudo-persistence, as further outlined below.

Mifepristone Has a Long Half-Life, is (Likely) Pseudo-Persistent, & Has Potential to Bioaccumulate

Various sources also confirm mifepristone has a long half-life[188] in the body of approximately 25-38 hours,[189] with one study reporting the half-life of mifepristone in serum up to 44 hours.[190] Its mean terminal half-life (after multiple doses) is reported to be 2 to 4 days, and its active metabolites also have a long half-life.[191] (Of note, half-life, biological half-life, plasma half-life, and terminal half-life are related terms.[192]) Though long half-lives in the body do not by themselves indicate environmental

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[187] "Nordic Drugs AB | Mifegyne, Tablet 200 mg," FASS, accessed January 5, 2026, at https://fass.se/health/product/19920904000068 (see also https://fass.se/health/product/20100302000013). (Note: under the heading "Environmental impact," one must click "see detailed environmental information.")

[188] Jericho Hallare and Valerie Gerriets, "Elimination Half-Life of Drugs," *StatPearls,* May 3, 2025, https://www.ncbi.nlm.nih.gov/books/NBK554498/.

[189] The half-life refers to "the length of time until "50% of the initial drug amount is removed from the body." See: Oskari Heikinheimo, "Clinical Pharmacokinetics of Mifepristone," Clinical Pharmacokinetics, Vol. 33, July 1997, https://link.springer.com/article/10.2165/00003088-199733010-00002, which states, "The pharmacokinetics of mifepristone are characterised by rapid absorption, a long half-life of 25 to 30 hours and micromolar serum concentrations following ingestion of doses currently in clinical use." See also: "PRODUCT INFORMATION - MS-2 Step," May 22, 2014, https://www.tga.gov.au/sites/default/files/auspar-mifepristone-misoprostol-141013-pi.pdf, which states, "The half-life of mifepristone is 36.5 to 38.3 hours." Also of note, "In terms of medical literature, Half-life is vividly describing the time that is taken by the plasma concentration of the drug substance to become half during the circulation in the blood going through various organs of the body (Smith, Beaumont, Maurer, & Di, 2018)." See: Khan, Rana Muhammad Awais, Umair-ul-Hassan, and Shafiq-ur-Rehman. 2018. "An Updated Review on Biological Half-Life & Volume of Distribution." *Global Pharmaceutical Sciences Review*, Vol. 3, No. 1, 2018, https://www.humapub.com/admin/alljournals/gpsr/papers/UgfF65XDtl.pdf.

[190] Raimo Kekkonen, Oskari Heikinheimo, Erik Mandelin, and Pekka Lähteenmäki, "Pharmacokinetics of Mifepristone after Low Oral Doses," Contraception ol. 54, No. 4, October 1996, https://doi.org/10.1016/S0010-7824(96)00193-X.

[191] Borje Darpo et al., "Assessment of the cardiac safety and pharmacokinetics of a short course, twice daily dose of orally-administered mifepristone in healthy male subjects," *Cardiology Journal*, Volume 20, No. 2, February 4, 2013, https://journals.viamedica.pl/cardiology_journal/article/download/CJ.2013.0028/24929.

[192] Specifically,

- "The biological half-life ($T_{1/2}$) is typically defined as the time required for the concentration of therapeutic agents in the body or plasma to fall by half."
- "Plasma half-life is the amount of time required for 50% of a drug's concentration to disappear from plasma."

persistence, in the case of mifepristone (again, it is eliminated from the body primarily through urine and feces[193]), it can be excreted for multiple days following use.[194] This multi-day excretion, with the contaminant entering wastewater systems over several days rather than in a single day (consider, for example, available evidence suggests misoprostol is mostly excreted in 24 hours[195]), may contribute to mifepristone and its active metabolites being pseudo-persistent (essentially, as thousands of women are excreting this drug on a daily basis and its use continues to increase, wastewater systems are receiving mifepristone and its active metabolites at faster rates than the likely rate of biodegradation in the environment). Furthermore, long half-lives are "directly correlated with a higher potential for bioaccumulation and, consequently, a greater risk of biomagnification."[196]

In short, while the half-life and excretion profile alone do not establish risk of harm, taken together with other data, including that:

- Mifepristone takes a long time to dissipate in the environment (is slow to biodegrade)

- "Terminal plasma half-life is the time required to divide the plasma concentration by two after reaching pseudo-equilibrium, and not the time required to eliminate half the administered dose. When the process of absorption is not a limiting factor, half-life is a hybrid parameter controlled by plasma clearance and extent of distribution. In contrast, when the process of absorption is a limiting factor, the terminal half-life reflects rate and extent of absorption and not the elimination process (flip-flop pharmacokinetics). The terminal half-life is especially relevant to multiple dosing regimens, because it controls the degree of drug accumulation, concentration fluctuations and the time taken to reach equilibrium."

The plasma half-life of mifepristone is also notable; it "has been found to range between 24 and 48 h . . . When compared to other steroids, which have plasma half-lives that range from minutes (progesterone) to 3–5 h, RU 486 exhibits an unusual lengthy plasma half-life." See: Tlou A. Makwakwa, Dineo E. Moema, and Titus A. M. Msagati, "Multi-criteria decision analysis: technique for order of preference by similarity to ideal solution for selecting greener analytical method in the determination of mifepristone in environmental water samples*," Environmental Science and Pollution Research*, Vol. 31, April 5, 2024, https://link.springer.com/article/10.1007/s11356-024-32961-3; Yoo-Seong Jeong and William J Jusko, "Determinants of Biological Half-Lives and Terminal Slopes in Physiologically Based Pharmacokinetic Systems: Assessment of Limiting Conditions," The AAPS Journal, Vol. 24, August 30, 2022, https://link.springer.com/article/10.1208/s12248-022-00739-5; P L Toutain and A Bousquet-Mélou, "Plasma terminal half-life," Journal of Veterinary Pharmacology and Therapeutics, December 2004, https://pubmed.ncbi.nlm.nih.gov/15601438/; Claudia E. Reusch, *Canine and Feline Endocrinology*, Chapter entitled "Glucocorticoid Therapy ," 2015, accessed at https://www.sciencedirect.com/topics/immunology-and-microbiology/plasma-half-life.

[193] N. N. Sarkar, "Mifepristone: bioavailability, pharmacokinetics and use-effectiveness," *European Journal of Obstetrics, Gynecology, and Reproductive Biology*.

[194] Linepharma International Limited, Mifegymiso: Product Monograph Including Patient Medication Information, November 6, 2017, https://pdf.hres.ca/dpd_pm/00042012.PDF. This source outlines, "elimination of mifepristone is slow at first (50% eliminated between 12 and 72 hours) and then becomes more rapid with a terminal elimination half-life of 18 hours. Mifepristone shows non-linear pharmacokinetics. Eleven days after a 600 mg dose of tritiated compound, 83% of the drug has been accounted for in the feces and 9% in the urine."

[195] JAMP Pharma Corporation, "Product Monograph, JAMP Misoprostol, Misoprostol Tablets, Manufacturer's Standard, 200 mcg," February 9, 2024, https://pdf.hres.ca/dpd_pm/00003172.PDF. As outlined in this source, per a 1984 pilot study, "a single dose of 200 mcg of tritiated-misoprostol in solution was administered to six healthy male subjects. The major portion (64% to 73%) of the orally administered radioactive dose was excreted in the urine within the first 24 hours, with 56% being excreted in the first 8 hours. An additional 15% was excreted in the feces in 24 hours." Short plasma half-lives for active misoprostol acid are consistent with rapid disposition.

[196] "How Does the Half-Life of a Chemical in an Organism Relate to Its Potential for Bioaccumulation?," *Sustainability Directory,* November 26, 2025, https://pollution.sustainability-directory.com/learn/how-does-the-half-life-of-a-chemical-in-an-organism-relate-to-its-potential-for-bioaccumulation/.

- Mifepristone and its metabolites remain active after excretion,
- Mifepristone is increasing in use, with approximately 700,000 women using the drug annually,

It is more than likely pseudo persistent. As stated by a 2019 study in *Pharmaceuticals of Emerging Concern in Aquatic Systems: Chemistry, Occurrence, Effects, and Removal Methods*, "PPCPs [pharmaceuticals and personal care products] are not all persistent, but **continuous release of many to the environment makes these compounds 'pseudopersistent'**. Pseudopersistent pharmaceuticals are likely to exhibit greater environmental persistence than other contaminants like pesticides, **because they are continually replenished**."[197] Likewise, as referenced above, a 2024 study in *Water Research X* notes "continuous addition" of parent pharmaceuticals (and personal care products) and their metabolites "in small notable amounts, has led to their being considered as 'pseudo-persistent'" in the environment, and as "they are biologically active even at low concentrations . . . their presence in treated drinking water may pose a significant threat to the drinking water quality."[198]

Again, based on the above evidence, **mifepristone and its active metabolites are likely among these "pseudopersistent compounds."** This persistence is particularly likely in areas with higher abortion rates, where, because it takes mifepristone days to biodegrade and it is constantly being re-added to the environment, concerning environmental concentrations are likely maintained. Indeed, consider that substances similar to mifepristone, the synthetic estrogens 17α-Ethinylestradiol (EE2) and mestranol (MeEE2) (*as outlined above, mifepristone is a synthetic antiprogesterone/antiprogestin*),[199] have been found by the Minnesota Department of Health (MN DHS) to be present "in some Minnesota surface waters at or above concentrations that may be harmful to aquatic life based on the scientific literature."[200] The MN DHS specifically found that **while EE2 "*can* degrade in the environment, there is a *constant replenishment from wastewater treatment plants*"** (emphasis added).[201] Related, a study on the "Occurrence of pharmaceutical compounds in urban wastewater," outlines that numerous pharmaceutical compounds [PhCs] "have been found in river biota, some at high levels . . . thereby evidencing the risk that **environmental concentrations of PhCs can be higher than their predicted no-effect concentrations**."[202] This is especially notable given the FDA's review of the Population Council's

[197] Manvendra Patel, et al., "Pharmaceuticals of Emerging Concern in Aquatic Systems: Chemistry, Occurrence, Effects, and Removal Methods," Chemical Reviews, Vo. 119, March 4, 2019, https://pubs.acs.org/doi/10.1021/acs.chemrev.8b00299.
[198] Kimberly Etombi Muambo et al., "Pharmaceuticals in raw and treated water from drinking water treatment plants nationwide: Insights into their sources and exposure risk assessment," Water Research X.
[199] National Library of Medicine | National Center for Biotechnology Information, "Compound | Mifepristone," PubChem . . .
[200] "17α-Ethinylestradioland Mestranol and Drinking Water," Minnesota Department of Health, September 2016, https://www.health.state.mn.us/communities/environment/risk/docs/guidance/gw/mestraethinyleinfo.pdf.
[201] Ibid.
[202] P. Verlicchi et al., "Occurrence of pharmaceutical compounds in urban wastewater: Removal, mass load and environmental risk after a secondary treatment—A review," *Science of The Total Environment,* Vol. 429, July 1, 2012, https://www.sciencedirect.com/science/article/pii/S0048969712005608?via%3Dihub.

Environmental Assessment on mifepristone (detailed in the background section) did not actually study whether it could cause harm but rather predicted (estimated), based on a calculation, that its concentration in water would be minimal.

Given that mifepristone and its active metabolites are—like EE2—continually entering our water supply, leading to ongoing exposure and rendering them "pseudo persistent," and that relatively little is known *"about the chemicals that interact with the progesterone pathway,"*[203] it is logical to conclude there is a potential for mifepristone and its active metabolites to bioconcentrate in aquatic organisms and bioaccumulate.[204]

Mifepristone's Presence Detected in Other Countries

In addition to the peer-reviewed study reporting mifepristone in U.S. source and tap waters and the above scientific data demonstrating how mifepristone and its active metabolites are entering and

[203] Adele Fabbrocini et al., "Mifepristone affects fertility and development in the sea urchin Paracentrotus lividus," *Molecular Reproduction and Development*.

[204] Note: While those critical of concerns related to mifepristone in the environment may point out that the previously referenced Swedish source states, *"Mifepristone has low potential for bioaccumulation,"* based in part on *"the estimated bioconcentration factors derived from the Mifepristone bioaccumulation study in fish,"* lack of consensus on the matter alongside other pertinent information suggests there is still need for further study: The National Center for Biotechnology Information states that mifepristone's "potential for bioconcentration in aquatic organisms is very high," based on its estimated bioconcentration factor (BCF) of 2,800 (BCF "describes the readiness of chemicals to concentrate in organisms when the compounds are present in the environment"). The BCF serves as key indicator in relation to the potential for bioaccumulation. Another source likewise states, "An estimated BCF of 2,800 suggests potential for bioconcentration in aquatic organisms is very high." See: National Center for Biotechnology Information, "PubChem Compound Summary for CID 55245, Mifepristone," PubChem, Retrieved June 2, 2025 from https://pubchem.ncbi.nlm.nih.gov/compound/Mifepristone and "Material Safety Data Sheet," TCI America, accessed January 22, 2026, https://www.zoro.com/static/cms/enhanced_pdf/ZQ_7nDiliq.pdf. It may also be helpful to note that, as outlined by the EPA in a 2020 document entitled *"Fish Bioconcentration Data Requirement: Guidance for Selection of Number of Treatment Concentrations,"*: *"While OPP has not established a BCF value of regulatory concern per se, it has used a BCF of 1,000 as a point of departure for devoting additional resources to evaluate bioaccumulation risks for a pesticide . . . a BCF value of 1,000 has been suggested by a variety of sources to denote chemicals warranting consideration for bioaccumulation potential*." See: "Fish Bioconcentration Data Requirement: Guidance for Selection of Number of Treatment Concentrations," Office of Pesticide Programs | Office of Chemical Safety and Pollution Prevention U.S. Environmental Protection Agency, July 15, 2020, https://www.epa.gov/sites/default/files/2020-07/documents/bcf-study-july-15-2020.pdf. Similarly, another source states: "a substance is considered to be not bioaccumulative if it has a BCF less than 1000, bioaccumulative if it has a BCF from 1000–5000 and very bioaccumulative if it has a BCF greater than 5,000." See "Bio-accumulation," ChemSafetyPro, February 1, 2016, https://www.chemsafetypro.com/Topics/CRA/Bioconcentration_Factor_BCF.html. See also: Marjan Vračko, "Mathematical (Structural) Descriptors in QSAR: Applications in Drug Design and Environmental Toxicology," Advances in Mathematical Chemistry and Applications, 2015, accessed January 5, 2026, at https://www.sciencedirect.com/topics/chemistry/bioconcentration-factor; Maria I Petoumenou et al., "Comparison between bioconcentration factor (BCF) data provided by industry to the European Chemicals Agency (ECHA) and data derived from QSAR models," *Environmental Research,* Vol. 142, October 2015, https://www.sciencedirect.com/science/article/abs/pii/S0013935115300529?via%3Dihub; "Aquatic Bioconcentration/Bioaccumulation," The Joint Research Centre: EU Science Hub, accessed January 22, 2026, https://joint-research-centre.ec.europa.eu/projects-and-activities/reference-and-measurement/european-union-reference-laboratories/eu-reference-laboratory-alternatives-animal-testing-eurl-ecvam/alternative-methods-toxicity-testing/validated-test-methods-health-effects/aquatic_en; P. Verlicchi et al., "Occurrence of pharmaceutical compounds in urban wastewater: Removal, mass load and environmental risk after a secondary treatment—A review," *Science of The Total Environment*.

contaminating U.S. water supplies, the following scientific studies establish that mifepristone has also been detected in other developed countries:

- A 2010 scientific study outlines that mifepristone has been detected in both hospital wastewaters and wastewater treatment plant effluent in China.[205]
- A 2014 scientific study detected mifepristone in Swiss wastewaters, with the highest detection being 17 ng/L in hospital wastewaters.[206]
- A 2024 scientific study on analytical methods used to detect mifepristone in water summarizes other research on the same and succinctly presents the threat of mifepristone:

  > *"Mifepristone residues in the aquatic environment have recently grown to be one of the most alarming public health concerns. Mifepristone has the potential to be hazardous to aquatic's life and humans, and it has been linked to the fast growth of endocrine disruptors in the environment . . . Mifepristone is widely distributed in the environment, and several studies that have been published using various analytical techniques demonstrate the ongoing interest in and intense level of research effort on this compound's presence in the environment."*[207]

Related, a 2023 study (referenced previously) outlines that, "*[V]ery high anti-progestogenic activities (up to 121 µg/L mifepristone equivalents [EQs]) were detected in surface waters in China (Rao et al., 2014). Anti-progestogenic activities as high as 32 µg/L mifepristone EQs were also reported in Australian surface waters (Scott et al., 2010), namely, in samples from industrial (50%) and residential (23%) areas, downstream of wastewater treatment plants (13%), and in agricultural regions (6%)."*[208] If mifepristone equivalents are in water, it is likely mifepristone itself also is (which we know is the case in other geographic areas).

Mifepristone's Threat to the Aquatic Environment

[205] Xianjun Liu et al., "Analysis of hormone antagonists in clinical and municipal wastewater by isotopic dilution liquid chromatography tandem mass spectrometry," *Analytical and Bioanalytical Chemistry*, Vol. 396, No. 8, March 1, 2010, https://research.ebsco.com/c/r3w5i4/viewer/pdf/gmrego5wyz?route=details. This study states, mifepristone "*was found in 17 samples [of hospital effluent] with a maximum value of 195 ng/L."* This same study further notes mifepristone was found in *"all the influent sewage samples"* and was likewise *"identified in the effluent"* (at .70 and .75 n/L).

[206] Adrian A. Ammann, et al., "LC-MS/MS determination of potential endocrine disruptors of cortico signalling in rivers and wastewaters," *Analytical and Bioanalytical Chemistry*, Vol. 406, October 7, 2014, https://link.springer.com/article/10.1007/s00216-014-8206-9#Tab5, Table 4 (https://link.springer.com/article/10.1007/s00216-014-8206-9/tables/4).

[207] Tlou A. Makwakwa, Dineo E. Moema, and Titus A. M. Msagati, "Multi-criteria decision analysis: technique for order of preference by similarity to ideal solution for selecting greener analytical method in the determination of mifepristone in environmental water samples," *Environmental Science and Pollution Research*, Vol. 31, April 5, 2024, https://link.springer.com/article/10.1007/s11356-024-32961-3; also available at https://pmc.ncbi.nlm.nih.gov/articles/PMC11058867/.

[208] Michal Pech et al., "Effects of mifepristone, a model compound with anti-progestogenic activity, on the development of African clawed frog (Xenopus laevis)," *Aquatic Toxicology,* Vol. 263, October 2023, https://www.sciencedirect.com/science/article/pii/S0166445X23002965#bib0047.

Adding to the above, according to a 2019 study, mifepristone has been reported in fresh water, "representing a danger for aquatic species."[209] Indeed, as it pertains to risks to aquatic life, several studies demonstrate that exposure to certain levels of mifepristone can be harmful to aquatic species:

- The aforementioned 2019 study found mifepristone exposure "caused a decrease in fertility and embryo development" in female sea urchins, specifically reducing the percent of normally developed larvae.[210]
- Another 2019 study on the effects of mifepristone on Nile tilapia found strong indication that "long-term exposure of RU486 [mifepristone] resulted in sex reversal of XX female fish."[211]
- A 2023 study on the African clawed frog found mifepristone-exposed frogs had an increased expression of progesterone receptors; additionally, "esrβ [estrogen receptor beta] and lh [luteinizing hormone] mRNA expression was up-regulated in the brain–pituitary complex of exposed frogs. All these changes could lead to unpredictable disruption of reproduction and reproductive behavior later in adulthood."[212] (Note: This study states that the concentrations tested are "environmentally relevant," given "*Three nominal concentrations of mifepristone were used in the experiment: 2, 22, and 215 ng* L^{-1}*. . . anti-progestogenic activity expressed in mifepristone equivalents is found in aquatic environments within a similar range or even higher.")*
- The above study concluded that further research on adult frog reproduction was required and a 2024 study followed, which found "Mifepristone caused a reduction in the reproductive success in exposed females," concluding, "exposure to compounds with anti-progestogenic activity. . . decreases reproductive success."[213] The final section on environmental implications likewise

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[209] Adele Fabbrocini et al., "Mifepristone affects fertility and development in the sea urchin Paracentrotus lividus," *Molecular Reproduction and Development*, Vol. 86, No. 10., January 13, 2019, https://pubmed.ncbi.nlm.nih.gov/30637836/.

[210] Ibid. Note: "The effects of mifepristone on the sea urchin P. lividus reproductive performance were evaluated by both acute . . . and chronic exposure." Specifically, "During the acute exposure, six adult sea urchins . . . were injected through the oral cavity with 5 μg (dissolved in ethanol) of mifepristone on the first and the third day"; and "In the chronic exposure, 10 sea urchins were exposed for 6 weeks in a recirculating rearing system, at a nominal seawater concentration of 100 μg/l of mifepristone (dissolved in ethanol). . . . The mifepristone concentration used in acute exposure was calculated taking into consideration that 10 mg of mifepristone proved to be an effective dose in women (Gemzell-Danielsson & Marions, 2004) and that the mean weight of the sea urchins was around 40 g. **The mifepristone concentration used in chronic exposure was calculated considering that the concentration of mifepristone in water decreases over time** (Blüthgen et al., 2013) and that under the experimental conditions used here mifepristone concentration decreased by 60% after 3 days in water." As a result, "in females after the oral mifepristone administration, even though a low percentage of fertilized eggs was found (< 10%), no NPL were obtained. Similarly, after mifepristone chronic exposure only about 30% of eggs were successfully fertilized and developed in normal plutei larvae."

[211] Jing Cai, Lu Li, Lingyun Song, Lang Xie, Feng Luo, Shaohua Sun, Tapas Chakraborty, Linyan Zhou, and Deshou Wang, "Effects of long term antiprogestine mifepristone (RU486) exposure on sexually dimorphic lncRNA expression and gonadal masculinization in Nile tilapia (Oreochromis niloticus)," Aquatic Toxicology, Vol. 215, October 2019, https://www.sciencedirect.com/science/article/abs/pii/S0166445X19305004?via%3Dihub.

[212] Michal Pech et al., "Effects of mifepristone, a model compound with anti-progestogenic activity, on the development of African clawed frog (Xenopus laevis)," *Aquatic Toxicology,* Vol. 263, October 2023, https://www.sciencedirect.com/science/article/pii/S0166445X23002965#bib0047.

[213] Michal Pech et al., "Effects of mifepristone, a model compound with anti-progestogenic activity, on the reproduction of African clawed frog (Xenopus laevis)," *Journal of Hazardous Materials*, Vol. 480, December 5, 2024,

states, "Our results showed that substances with anti-progestogenic activity can negatively affect the ability of amphibians to reproduce when present in the aquatic environment."[214]

- A 2024 study on Tiger puffer fish highlighted that mifepristone "can induce masculinization of XX Takifugu rubripes," detailing that six genetic females treated with mifepristone "exhibited a male gonadal phenotype, confirming that RU486 induced masculinization in fugu."[215]
- A follow-up 2025 study on Tiger puffers found "evidence that ncRNAs may participate in RU486-induced masculinization" and confirmed the same, reiterating that "*our previous study discovered that administering RU486 during sex differentiation can alter the expression of several sex-related genes . . . and steroid hormone receptor genes (e.g., androgen receptor AR and progesterone receptor PGR) in gonads, and induced 100% masculinization in genetic XX tiger puffer*."[216]

It is vital we understand whether humans face similar risks from exposure to mifepristone. And while the levels of mifepristone administered in the studies are not necessarily equivalent to the levels of mifepristone present in the environment, we now have an idea of what those levels are in certain cities:[217]

- In Austin, Texas, water samples upstream of wastewater treatment plants averaged 10.8 ppt and samples from downstream averaged 12.8 ppt.
- In Carbondale, Illinois, water samples upstream of wastewater treatment plants averaged 26.1 ppt and samples from downstream averaged 23.5 ppt.
- In Blacksburg, Virginia, water samples upstream of wastewater treatment plants averaged 2.2 ppt and samples from downstream averaged 2.6 ppt.

The data from these three cities is a vital first step, but as research outlines that mifepristone exposure causes harm to wildlife over time and it is still not clear what the environmental levels of mifepristone and its active metabolites are nationwide, further nationwide occurrence data is sorely needed—both for the environment as well as for drinking water sources.

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https://www.sciencedirect.com/science/article/abs/pii/S0304389424030723?via%3Dihub. *Note: The study tested different levels of mifepristone, with varying results, but notes: "Breeding rate for females exposed to 1380 ng·L−1 mifepristone was only 50 %. . . Females exposed to 1380 ng·L−1 mifepristone had lower estradiol levels in plasma, lower mRNA expression of lh and fsh in brain–pituitary complex, and p450scc in ovaries. In liver, mRNA level of npr was significantly increased in females exposed to 120 ng·L−1 mifepristone. mRNA expression of mpr, erβ, dio2, and dio3 were upregulated in animals exposed to 9 ng·L−1 and 120 ng·L−1 mifepristone, whereas vtg expression was significantly downregulated in females exposed to 1380 ng·L−1 mifepristone.* ***All these findings show that exposure to compounds with anti-progestogenic activity affects the hypothalamus–pituitary–gonad axis and decreases reproductive success****."*

[214] Ibid.

[215] Rui Gao et al., "Administration of mifepristone can induce masculinization and alter the expression of sex-related genes in Takifugu rubripes," *Aquaculture Reports,* Vol. 36, June 2024, https://www.sciencedirect.com/science/article/pii/S2352513424002606?via%3Dihub.

[216] Rui Gao et al., "The potential regulatory role of non-coding RNAs in mifepristone-induced masculinization in Takifugu rubripes gonads," *BMC Genomics,* Vol. 26, May 12, 2025, https://link.springer.com/article/10.1186/s12864-025-11647-1.

[217] Elise Rose and Michael Varveris, "Anti-Progesterone in Environmental Water," *Issues in Law and Medicine | A Journal of the Alliance for Hippocratic Medicine*.

More on Mifepristone's Threat to Human Health and Fertility

The likelihood that ingestion of trace amounts of mifepristone and its active metabolites over time may harm human health is detailed under the section "How Mifepristone May Adversely Affect Human Health" in Point 1. To summarize:

- Active mifepristone contaminants are designed to disrupt natural hormonal processes by blocking a vital fertility hormone, thereby adversely affecting fertility (among other things).
- These contaminants have never been comprehensively studied under real-world circumstances to determine the potential harm they may be causing to wildlife and humans[218]—particularly in children and adults of childbearing age,[219] and particularly at levels that are likely occurring in the environment.
- Exposure to certain levels of mifepristone clearly harms the reproductive systems of aquatic wildlife—we need to know whether and at what levels it also harms human reproductive health.

Based on the above, it is clear mifepristone and its active metabolites may, over time, have harmful impacts on both aquatic species and humans consuming trace amounts of them.

Concluding Point 2

The above points highlight the lack of consensus in the available scientific literature. Indeed, uncertainty and lack of consensus in the limited data available on mifepristone's environmental impacts is one of the primary reasons LCA is calling for mifepristone to be placed on CCL 6 as well as the UCMR 6, as, though the threat of harm is clear, U.S. water supplies have never been comprehensively monitored to determine the amount of contamination present from mifepristone and its active metabolites. Furthermore, as mifepristone and its active metabolites are constantly being replenished in the environment from wastewater treatment plants and is more than likely *slowly degraded* in the environment (*as noted, while some sources state this data is not available, those that do have it suggest it is slow*), one can conclude that their **persistent presence** in the environment is highly probable, emphasized by recent findings of the parent compound in three U.S. cities. All of this underscores the fact that there is a "substantial likelihood" that mifepristone and its active metabolites "occur in public water systems with a frequency and at levels of public health concern." Placing mifepristone on UCMR 6 would provide further evidence to assist in meeting this criterion.

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[218] Ojima Zechariah Wada and David Bamidele Olawade, "Recent occurrence of pharmaceuticals in freshwater, emerging treatment technologies, and future considerations: A review." See also Manvendra Patel et al., "Pharmaceuticals of Emerging Concern in Aquatic Systems: Chemistry, Occurrence, Effects, and Removal Methods."
[219] "The MAHA Report | Make Our Children Healthy Again Assessment," The White House, accessed January 5, 2026, https://www.whitehouse.gov/wp-content/uploads/2025/05/WH-The-MAHA-Report-Assessment.pdf.

Point 3: *"In the sole judgment of the Administrator, regulation of such contaminant presents a meaningful opportunity for health risk reduction for persons served by public water systems."*

LCA appeals to Administrator Zeldin to consider the above evidence that regulating mifepristone and its active metabolites, including by placing them on UCMR 6, presents a "meaningful opportunity" for reducing the health risk posed by mifepristone and its active metabolites in our drinking water. In addition, we would like to invite the Administrator to consider the following:

- Mifepristone is intentionally lethal in nature and generates pathological waste, distinguishing it from all other FDA-approved pharmaceuticals. This alone suggests it merits a heightened level of scrutiny.
- Ensuring mifepristone and its active metabolites are placed on the final CCL 6 and final UCMR 6 would serve to help rectify the FDA's historic oversight in failing to do a proper environmental assessment.
- Though causation cannot be demonstrated yet (given, again, a comprehensive study on the matter has never been conducted), the correlation between the increasing use of this pill—now accounting for approximately 70% of the over 1 million abortions that occur annually[220]—and increasing infertility rates in the U.S. is alarming.[221] Indeed, as outlined above, infertility now affects 1 in 6 individuals in their lifetime.[222] This begs the question: In the midst of what a leading government official has termed an "infertility crisis,"[223] are American men and women drinking trace amounts of a chemical substance that blocks a vital fertility hormone? Further study is urgently needed to establish whether there is causation.

While at a minimum mifepristone and its active metabolites merit placement on CCL 6 and UCMR 6, given one of the primary purposes of the UCMR is to provide "national occurrence data in drinking water" for concerning contaminants, to assist the EPA in determining whether to actually regulate any specific contaminants listed, LCA also urges the immediate solicitation of independent, gold-standard scientific research to determine whether any or prolonged exposure to mifepristone and

[220] 70 percent is a conservative estimate, given we know as of 2023, it is at least 65%, and that it is likely much higher due to the continual increase in the use of chemical abortion year after year as well as the lack of reporting requirements. See: Isaac Maddow-Zimet, Rachel K. Jones and Emma Stoskopf-Ehrlich, "Abortion in the United States," Guttmacher Institute. See also, Ingrid Skop, M.D., "Fact Sheet: Deficiencies Affecting U.S. Abortion Data Collection and Application," Charlotte Lozier Institute, July 24, 2025, https://lozierinstitute.org/fact-sheet-deficienciesaffecting-u-s-abortion-data-collection-and-application/, and "Abortion pills by mail in every state," Plan-C, 2025, https://www.plancpills.org/.
[221] Brady E. Hamilton, Ph.D., Joyce A. Martin, M.P.H., and Michelle J.K. Osterman, M.H.S., "Vital Statistics Rapid Release | Births: Provisional Data for 2024," National Vital Statistics System, No. 38, April 2025, https://www.cdc.gov/nchs/data/vsrr/vsrr038.pdf.
[222] "1 in 6 people globally affected by infertility: WHO," World Health Organization, April 4, 2023, https://www.who.int/news/item/04-04-2023-1-in-6-people-globally-affected-by-infertility.
[223] "RFK Jr Sounds Alarm on U S Health Crisis "Our Children Are in Trouble," YouTube, April 8, 2025, https://www.youtube.com/shorts/shX_OHfg1Wo.

its active metabolites, even at trace (ppt) levels, effectively blocks progesterone in animals or humans, or otherwise adversely affects animal or human health and fertility.

As perhaps best stated by a 2010 study on certain contaminants in wastewater: "*[O]ur understanding of the environmental fate of these drugs [mifepristone among them] is still minimal. Considering the potential endocrine-disrupting properties of hormone antagonist pharmaceuticals, more detailed and comprehensive studies need to be conducted in the future.*" [224] This recommendation also falls squarely within the current administration's priorities, many of which are outlined above:

- The Make America Healthy Again (MAHA) Commission recommended launching a "national initiative to map gene-environment interactions affecting childhood disease risk, **especially for pollutants, endocrine disruptors, and pharmaceuticals"** —mifepristone and its active metabolites are all three.[225]
- Building on this report, in September 2025, the MAHA Commission explicitly called out the need for researching pharmaceuticals in our water supply.[226]
- As noted, Health and Human Services Secretary Robert F. Kennedy Jr. has called for an investigation into our nation's "alarming decline in fertility,"[227] which, combined with the above, suggests that at the very least, environmental review of this drug deserves immediate attention.

Finally, while we understand this call for comments pertains to revisions that will establish the UCMR 6, LCA reiterates our strong recommendation to include mifepristone and its active metabolites on the final CCL 6 as well.

Regarding the 30 Contaminant Maximum for the UCMR

As addition of mifepristone and its active metabolites would require removing other contaminants from the proposed UCMR 6, we would first urge reevaluation of all proposed UCMR 6 contaminants in light of the above data. It is worth considering whether chemical abortion pill contaminants present a greater risk than other proposed contaminants, particularly given mifepristone was designed and FDA-approved to cause fetal demise (it is lethal in purpose) and our nation is in the midst of a fertility crisis.

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[224] Xianjun Liu et al., "Analysis of hormone antagonists in clinical and municipal wastewater by isotopic dilution liquid chromatography tandem mass spectrometry," *Analytical and Bioanalytical Chemistry*.
[225] The MAHA Report | Make Our Children Healthy Again Assessment," The White House, accessed May 23, 2025, https://www.whitehouse.gov/wp-content/uploads/2025/05/MAHA-Report-The-White-House.pdf.
[226] "MAHA Commission Unveils Sweeping Strategy to Make Our Children Healthy Again," U.S. Department of Health and Human Services | Press Room, September 9, 2025, https://www.hhs.gov/press-room/mahacommission-report-childhood-disease-strategy.html.
[227] @Robert F. Kennedy Jr, X Post, September 20, 2024, https://x.com/RobertKennedyJr/status/1837263154478563798?lang=en.

Should there be uncertainty on which contaminants present the greatest risks, we would recommend the Administrator of the EPA use his authority under Section 1445(a)(1)(A) of the Safe Drinking Water Act (SDWA) to monitor mifepristone and its active metabolites. Said section states "the Administrator may reasonably require" monitoring by regulation to both "assist the Administrator in establishing regulations" and "in evaluating the health risks of unregulated contaminants," among other things.[228] Monitoring for total chromium in conjunction with UCMR 3 provides precedent for such a move.[229] Conversely, the EPA could shift certain proposed UCMR contaminants to have them monitored instead under Section 1445(a)(1)(A) of the SDWA and place mifepristone and its active metabolites on UCMR 6.[230]

Also, while we are not proposing specific removal of the following, the following contaminants have been monitored on previous UCMR lists, though their minimum reporting levels were higher: 1,2,3-trichloropropane, 2,4-dinitrotoluene, and 2,6-dinitrotoluene.[231]

It is finally worth noting that the EPA has at times been very slow to establish regulations. Consider, for example, that certain PFAS were monitored beginning in 2013, and it was eleven years prior to

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[228] The full exceprt states "(1)(A) Every person who is subject to any requirement of this subchapter or who is a grantee, shall establish and maintain such records, make such reports, conduct such monitoring, and provide such information as the Administrator may reasonably require by regulation to assist the Administrator in establishing regulations under this subchapter, in determining whether such person has acted or is acting in compliance with this subchapter, in administering any program of financial assistance under this subchapter, in evaluating the health risks of unregulated contaminants, or in advising the public of such risks. In requiring a public water system to monitor under this subsection, the Administrator may take into consideration the system size and the contaminants likely to be found in the system's drinking water." 42 U.S.C. § 300j–4(a)1(A), "Provision of information to Administrator; monitoring program for unregulated contaminants," accessed August 7, 2026, https://uscode.house.gov/view.xhtml?req=granuleid%3AUSC-prelim-title42-chapter6A-subchapter12&saved=%7CKHRpdGxlOjQyIHNlY3Rpb246MzAwaiBlZGl0aW9uOnByZWxpbSk%3D%7C%7C%7C0%7Cfalse%7Cprelim&edition=prelim.

[229] U.S. Environmental Protection Agency, "Third Unregulated Contaminant Monitoring Rule," archived January 19, 2021, https://19january2021snapshot.epa.gov/dwucmr/third-unregulated-contaminant-monitoring-rule_.html.

[230] Likewise, we would encourage the Administrator to consider using his authority under the Clean Water Act to require reporting levels of mifepristone and its active metabolites in wastewater treatment plant effluents and findings of fetuses in wastewater treatment plants. See: 33 U.S.C. § 1318(a), accessed August 10, 2026 "Records and Reports; Inspections," https://uscode.house.gov/view.xhtml?req=granuleid:USC-prelim-title33-section1318&num=0&edition=prelim. The relevant text states: *"Whenever required to carry out the objective of this chapter, including but not limited to (1) developing or assisting in the development of any effluent limitation, or other limitation, prohibition, or effluent standard, pretreatment standard, or standard of performance under this chapter; (2) determining whether any person is in violation of any such effluent limitation, or other limitation, prohibition or effluent standard, pretreatment standard, or standard of performance; (3) any requirement established under this section; or (4) carrying out sections 1315, 1321, 1342, 1344 (relating to State permit programs), 1345, and 1364 of this title-*
(A) the Administrator shall require the owner or operator of any point source to (i) establish and maintain such records, (ii) make such reports, (iii) install, use, and maintain such monitoring equipment or methods (including where appropriate, biological monitoring methods), (iv) sample such effluents (in accordance with such methods, at such locations, at such intervals, and in such manner as the Administrator shall prescribe), and (v) provide such other information as he may reasonably require."

[231] U.S. Environmental Protection Agency, "First Unregulated Contaminant Monitoring Rule," accessed August 7, 2026, https://www.epa.gov/dwucmr/first-unregulated-contaminant-monitoring-rule and U.S. Environmental Protection Agency, "Third Unregulated Contaminant Monitoring Rule," accessed August 7, 2026, https://www.epa.gov/dwucmr/third-unregulated-contaminant-monitoring-rule.

maximum contaminant levels (MCLs) being established.[232] Yet even prior to this the EPA recognized PFAS risks: In 2006, the EPA launched the PFOA Stewardship Program "because of concerns about the impact of PFOA and long-chain PFASs on human health and the environment"[233] —18 years prior to establishing MCLs for the same.

We would urge EPA officials to take swifter action on mifepristone and its active metabolites based on the risks they present to human health and fertility.

Conclusion

Though required by law, the federal government (FDA) has never properly studied the potential adverse environmental effects of mifepristone. Such adverse effects include possible contributions to sewer system overflows and subsequent pathological waste contamination of water bodies resulting from improper disposition of aborted human fetal remains (which do not break down like feces and toilet paper), as well as possible adverse impacts on human and animal health and fertility from the ingestion of mifepristone and its active metabolites via drinking water. In short:

- Hundreds of thousands of women excrete mifepristone and its active metabolites annually, which then pass through WWTP into water supply sources.
- Environmental fate characteristics (slow degradation, synthetic chemistry), combined with constant replenishment, suggest mifepristone and its active metabolites persist in the environment.
- Active mifepristone contaminants have been detected in treated municipal drinking water samples in the U.S., which is unsurprising as most drinking water treatment infrastructure is not designed to remove this class of contaminants.
- Mifepristone acts as an endocrine disruptor. As numerous scientific articles demonstrate that endocrine-disrupting substances can have an adverse effect on animal and human health even if present in trace amounts, it stands to reason that even if the amount of mifepristone and its active metabolites in our water is minimal—present in ppt—similar harm is likely occurring.

Furthermore, mifepristone is the only pharmaceutical that was both developed and approved by the FDA to end a life in the womb and generate human fetal remains and medical waste, which in and of itself is enough reason to ensure it undergoes heightened environmental scrutiny, warranting placement on the EPA's final UCMR 6 (as well as CCL 6) and further research.

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[232] U.S. Environmental Protection Agency, "Third Unregulated Contaminant Monitoring Rule," archived January 19, 2021, https://19january2021snapshot.epa.gov/dwucmr/third-unregulated-contaminant-monitoring-rule_.html; United States Environmental Protection Agency, "Per- and Polyfluoroalkyl Substances (PFAS) | Final PFAS National Primary Drinking Water Regulation," Updated May 18, 2026, https://www.epa.gov/sdwa/and-polyfluoroalkyl-substances-pfas.
[233] U.S. Environmental Protection Agency, "Fact Sheet: 2010/2015 PFOA Stewardship Program," February 26, 2026, https://www.epa.gov/assessing-and-managing-chemicals-under-tsca/fact-sheet-20102015-pfoa-stewardship-program.

Adding weight to the need for environmental scrutiny, as clearly stated in a recent congressional letter to the EPA, "*If residual amounts of the drug and its active metabolites persist in wastewater, prolonged exposure could potentially interfere with a person's fertility, regardless of sex. . . it is reckless to allow a known progesterone blocker to be flushed into America's drinking water without knowing definitively if it impacts fertility rates*."[234] Given that UCMR data serves as a precursor to regulation, ensures "science-based decision-making," and helps "prioritize protection" of vulnerable populations (such as pregnant women and those experiencing serious illness, like certain infertility cases), Liberty Counsel Action reiterates its above recommendation that the EPA include mifepristone, CAS Registry Number 84371-65-3, and mifepristone's active monodemethylated, didemethylated, and hydroxylated metabolites, by name on the final UCMR 6.

Appendix 1: Supplementary Information to Further Address Opposing Viewpoints

Please note: The information referenced in the responses to common arguments at times repeats information noted above, however, we felt it may be helpful to provide a few consolidated responses to such views.

1. Argument: The peer-reviewed study published in July 2026 that claims it found mifepristone in U.S. waters lacked credibility, largely because it was conducted by and published in a journal of pro-life advocates. As Politico stated:

- "A single study, in a journal run by anti-abortion physicians, isn't going to realign the science around the medication," and
- "The testing method described in the study actually measures a reaction in the water samples that could be caused either by the drug or equivalent chemicals that block the hormone progesterone."[235]

Response: In the same article, the author of the study—who holds a doctorate in agronomy and environmental plant physiology—aptly rebuts these critiques, emphasizing that the lab the authors contracted with "tested specifically for mifepristone . . . and any other chemical detected would have to be genetically 'identical or nearly identical' to the abortion medication, and 'the odds against that would be very great.'" She goes on to state, "This is a bio assay that's based on enzymes and

[234] U.S. Senator James Lankford and Representative Josh Brecheen, et al., "Members of Congress to the Honorable Lee Zeldin, Administrator, U.S. Environmental Protection Agency," June 18, 2025, https://www.lankford.senate.gov/wp-content/uploads/2025/06/Congressional-Letter-to-EPA-reMifepristone1.pdf.
[235] Alice Miranda Ollstein and Ariel Wittenberg, "Activists 'throwing everything' they can against abortion turn to wastewater data," Politico, July 26, 2026, https://www.politico.com/news/2026/07/26/abortion-opponents-new-weapon-wastewater-data-01011537.

antibodies are like a lock and key . . . In order for something else to fit in there, it has to be very similar. And mifepristone is not a simple molecule."[236]

While she acknowledged "that some of what was detected 'could be a metabolite of mifepristone that's very close in structure,'" that would underscore the point that these contaminants are in our water and that further testing is warranted.

To the point that the journal lacks credibility:

- The unfortunate reality is that very few peer-reviewed publications (if any) are truly objective when it comes to the abortion-life debate, and hardly any appear willing to risk the ire of the abortion industry by publishing anything that even *hints* at questioning the "safety and efficacy" of abortion.
- Furthermore, the same argument can be turned on its head when it comes to "peer reviewed" articles that support the abortion lobby; for example, the Journal of the American Medical Association (JAMA) has regularly been criticized for its poor methodologies and deceptive studies. As outlined in one such critique:

  "The Journal of the American Medical Association is at it again, with yet another downright deceptive pro-choice study, this time alleging that state pro-life laws lead to worse care for pregnant women who suffer miscarriages. Planned Parenthood announced: 'JAMA's study finds that patients in states where abortion is banned at or before six weeks of pregnancy were less likely to be given the best standard of care medication to manage their miscarriages and more likely to face delays in treatment.' In a brazen attempt to increase the availability of abortion, the study's authors contend that women who experience an early miscarriage should be given the abortion pill regimen—mifepristone followed by misoprostol—to speed up the process. The authors then attack pro-life states because doctors in these states have not rapidly adopted this off-label use of a drug, mifepristone, with a Food and Drug Administration-approved use that is ordinarily illegal in these states. Meanwhile, none of the three manufacturers of mifepristone—Danco Laboratories, GenBioPro, and Evita Solutions—has ever applied to the FDA to add this secondary use to the drug's label."[237]

The author then goes on to outline three major flaws of the JAMA study. And this is just one example.

Finally, to the point that this is only one study: Indeed, it is, and as the authors point out, it is proof that further study is warranted:

> *"Further investigation is necessary to provide a better understanding of the impact of any levels of mifepristone in the environment, and the efficacy of its removal by any treatment systems. Concerns about the environmental, clinical and public health impact of*

[236] Ibid.
[237] Jamie Bryan Hall, "No, JAMA Didn't Just Prove That Pro-Life Laws Lead to Worse Miscarriage Care," The Daily Signal, June 23, 2026, https://www.dailysignal.com/2026/06/23/jama-miscarriage-care/.

> *mifepristone raise urgent questions about the current lack of meaningful regulation of this widely-used pharmaceutical."*

The federal government should be urgently searching for valid, cost-effective methods to test this chemical compound.

2. Argument: "There is **no credible evidence**" that the abortion pill mifepristone or the human fetal remains generated by its use are "contaminating U.S. water supplies at levels that would harm humans, animals, or the environment."[238]

Response: This argument is both misleading and untrue. It is untrue to say there is *no* credible evidence that mifepristone may harm humans and the environment (though "credible" is arguably a subjective word). Indeed, the evidence base suggesting mifepristone may be harmful to our ecosystem (including you and me) is substantial (see the above sections "The contaminant may have an adverse effect on the health of persons" and "Mifepristone's Threat to the Aquatic Environment.")

As it pertains to concerning levels, in addition to the levels found in the 2026 study outlined above, consider a 2019 study on pharmaceuticals of emerging concern that explicitly outlines that the "long-term effects" of daily, low doses of pharmaceuticals consumed in drinking water "are still unknown," which is cause for concern.[239]

Most importantly, mifepristone's presence in our water, and the effects such presence may have, *have not been comprehensively studied*. By no means should a lack of data lead to the conclusion that no harm is occurring. What one should logically conclude is that further study is needed, a very common conclusion in scientific inquiry.

3. Argument: Many pharmaceuticals will be removed in wastewater treatment plant processes, and mifepristone specifically is "effectively removed by most modern wastewater treatment plants" (as it is claimed that it "tends to bind to solid waste").[240]

Response: We now have scientific research showing that mifepristone is, in fact, *not* effectively removed by wastewater treatment plants (outlined in Point 1). Consider the following:

- A recent study on mifepristone's presence specifically in U.S. water supplies demonstrates that, quite clearly, it is not "effectively removed by most modern wastewater treatment plants," given

[238] Jody McCreary, "Abortion Contaminants in the Water Supply: Are the Rumors True?," MedPage Today, September 17, 2025, https://www.medpagetoday.com/obgyn/abortion/117489.
[239] Manvendra Patel et al., "Pharmaceuticals of Emerging Concern in Aquatic Systems: Chemistry, Occurrence, Effects, and Removal Methods," *Chemical Reviews,* Vol. 119. No. 6, 2019, https://pubs.acs.org/doi/10.1021/acs.chemrev.8b00299.
[240] Jody McCreary, "Abortion Contaminants in the Water Supply: Are the Rumors True?."

it was found upstream *and downstream* of three wastewater treatment plants (in Illinois, Texas, and Virginia).[241]

- Various scientific studies on mifepristone in our water concur—it is there and it does present a risk.
    - According to a 2010 study, mifepristone has been detected in both hospital wastewaters[242] and wastewater treatment plant effluent.[243]
    - According to a 2019 study, mifepristone has been reported in fresh water, "representing a danger for aquatic species."[244]
    - As summarized by a 2024 study, "**Mifepristone is widely distributed in the environment**."[245]
- U.S. water supplies have never been comprehensively monitored or tested to determine the amount of contamination present from mifepristone and its active metabolites, nor have said contaminants been comprehensively studied to determine the harm they may be causing to wildlife and humans.

Furthermore, "many" and "most" are not "all." Consider:

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[241] Elise Rose and Michael Varveris, "Anti-Progesterone in Environmental Water," *Issues in Law and Medicine | A Journal of the Alliance for Hippocratic Medicine*.

[242] Xianjun Liu et al., "Analysis of hormone antagonists in clinical and municipal wastewater by isotopic dilution liquid chromatography tandem mass spectrometry," *Analytical and Bioanalytical Chemistry*, Vol. 396, No. 8, March 1, 2010, https://research.ebsco.com/c/r3w5i4/viewer/pdf/gmrego5wyz?route=details. This study states, "*Although mifepristone is easily transformed to monochloromifepristone, which induces a low recovery from clinical wastewater, it was found in 17 samples [of hospital effluent] with a maximum value of 195 ng/L."* This same study further notes mifepristone was found in *"all the influent sewage samples"* and was likewise *"identified in the effluent"* (at .70 and .75 n/L).

[243] Ibid. See also a 2014 study in which "*A targeted analytical method was established to determine a large number of chemicals known to interfere with the gluco- and mineralocorticoid signalling pathway;*" it detected mifepristone in Swiss wastewaters, with the highest detection being 17 ng/L in hospital wastewaters. See: Adrian A. Ammann, et al., "LC-MS/MS determination of potential endocrine disruptors of cortico signalling in rivers and wastewaters," *Analytical and Bioanalytical Chemistry*, Vol. 406, October 7, 2014, https://link.springer.com/article/10.1007/s00216-014-8206-9#Tab5, Table 4 (https://link.springer.com/article/10.1007/s00216-014-8206-9/tables/4).

[244] Adele Fabbrocini et al., "Mifepristone affects fertility and development in the sea urchin Paracentrotus lividus," Molecular Reproduction and Development, Vol. 86, No. 10., January 13, 2019, https://pubmed.ncbi.nlm.nih.gov/30637836/. Note: The study also states that mifepristone has been reported in saltwater but does not provide a source. Another article states, "*Very high anti-progestogenic activities (up to 121 µg/L mifepristone equivalents (EQs)) were detected in surface waters in China (Rao et al., 2014). Anti-progestogenic activities as high as 32 µg/L mifepristone EQs were also reported in Australian surface waters (Scott et al., 2010), namely, in samples from industrial (50 %) and residential (23 %) areas, downstream of wastewater treatment plants (13 %), and in agricultural regions (6 %)."* Because mifepristone is an anti-progestogenic compound, it could be among the substances contributing to the anti-progestogenic activity measured in mifepristone equivalents (and, it has been detected in other water sources). See: Michal Pech et al., "Effects of mifepristone, a model compound with anti-progestogenic activity, on the development of African clawed frog (Xenopus laevis)," *Aquatic Toxicology,* Vol. 263, October 2023, https://www.sciencedirect.com/science/article/pii/S0166445X23002965#bib0047.

[245] Tlou A. Makwakwa, Dineo E. Moema, and Titus A. M. Msagati, "Multi-criteria decision analysis: technique for order of preference by similarity to ideal solution for selecting greener analytical method in the determination of mifepristone in environmental water samples*," Environmental Science and Pollution Research*, Vol. 31, April 5, 2024, https://link.springer.com/article/10.1007/s11356-024-32961-3.

- Recent studies have shown numerous pharmaceuticals in both our water supply and drinking water.[246] For example, a joint, two-phase U.S. Geological Survey-U.S. Environmental Protection Agency study found several pharmaceutical contaminants present in treated water, specifically detecting 26 different pharmaceuticals across 25 drinking water treatment plants.[247] This may be in part because, according to the EPA, "*synthetic compounds, such as pharmaceuticals, are often manufactured to be resistant to metabolic transformation.*"[248] Notably, mifepristone is a synthetic drug.[249]
- Most WWTP are **conventional**, which are not designed to fully remove active pharmaceutical contaminants.[250] More specifically, conventional WWTP do *not* utilize advanced treatment processes like ozonation (which are argued to "further degrade steroidal drugs and make the

[246] Examples include but are not limited to those listed under the section entitled "Exposure Context: Americans May Be Consuming Trace Amounts of Mifepristone and Its Active Metabolites."

[247] Edward T. Furlong et al., "Nationwide reconnaissance of contaminants of emerging concern in source and treated drinking waters of the United States: Pharmaceuticals," *Science of The Total Environment*, Vol. 579, February 1, 2017, https://www.sciencedirect.com/science/article/abs/pii/S0048969716305551?via%3Dihub. Similarly, a study in South Korea found that "while water treatment processes are effective, there are some persistent compounds that prove challenging to fully eliminate." It goes on to note that though most pharmaceuticals "*are not highly persistent, continuous addition of the parent PPCPs and their metabolites to the environment in small notable amounts, has led to their being considered as "pseudo-persistent*"* and, given "*they are biologically active even at low concentrations . . . their presence in treated drinking water may pose a significant threat to the drinking water quality***.**" As outlined: Mifepristone and its active metabolites are both biologically active and continually added to the environment. Even so, "despite the global increase in the manufacture, consumption, and environmental discharge of [pharmaceuticals and personal care products or, PPCPs], for a vast majority, there has been no environmental regulations," including for mifepristone. While some have made it on the EU's watch list (in 2020, five PPCPs "were included; in 2022, a few more were proposed), mifepristone continues to avoid scrutiny. See: Kimberly Etombi Muambo et al., "Pharmaceuticals in raw and treated water from drinking water treatment plants nationwide: Insights into their sources and exposure risk assessment," Water Research X, Vol. 24, September 1, 2024, https://www.sciencedirect.com/science/article/pii/S258991472400046X.
*Note: The article cites the following: Manvendra Patel, et al., "Pharmaceuticals of Emerging Concern in Aquatic Systems: Chemistry, Occurrence, Effects, and Removal Methods," *Chemical Reviews,* Vo. 119, March 4, 2019, https://pubs.acs.org/doi/10.1021/acs.chemrev.8b00299, which states, "PPCPs are not all persistent, but continuous release of many to the environment makes these compounds 'pseudopersistent'. Pseudopersistent pharmaceuticals are likely to exhibit greater environmental persistence than other contaminants like pesticides, because they are continually replenished even though undergoing biodegradation, photodegradation, and particulate sorption."

[248] "Management and Disposal of Unused Pharmaceuticals (Interim Technical Report) (EPA-821-R-08-013) - DCN 05519," U.S. Environmental Protection Agency, September 15, 2008, https://www.regulations.gov/document?D=EPA-HQ-OW-2006-0771-1694.

[249] Blake M. Autry and Roopma Wadhwa, "Mifepristone," National Library of Medicine, February 28, 2024, https://www.ncbi.nlm.nih.gov/books/NBK557612/.

[250] "Primer for Municipal Wastewater Treatment Systems," United States Environmental Protection Agency, September 2004, https://www.epa.gov/sites/default/files/2015-09/documents/primer.pdf. Specifically, "Conventional Systems are wastewater treatment systems that have been traditionally used to collect municipal wastewater in sewers and convey it to a central facility for treatment prior to discharge to surface waters. Either primary or secondary treatment may be provided in a conventional system." Per another source, "As of 2022, there were 17,544 publicly owned treatment works (POTWs) operating in the U.S. During that period, only 37.5 percent of them had advanced treatment processes in their plants. Advanced treatment aims to reduce or eliminate impurities below what is attainable through more **conventional secondary treatment**, for example, ozone treatment, membrane bioreactors, and ultraviolet processes." Lucía Fernández, "Distribution of publicly owned wastewater treatment works (POTWs) in the United States as of 2022, by treatment level," Statista, November 28, 2025, https://www.statista.com/statistics/1473528/distribution-wastewater-treatment-plants-usa-by-type/.

likelihood of meaningful exposure through drinking water extremely low"[251]). As aptly summarized by one research article:

> *Pharmaceuticals have long been present in the environment . . . but their detection and hazardous effects have only emerged in the past 2–3 decades. Despite many publications on this topic, their individual and combined acute and chronic effects on the flora, fauna, and humans are not well understood. No global legal maximum environmental concentrations exist for pharmaceutically active compounds. . .* ***Primary and secondary WWTP treatments generally are unable to remove these pollutants, leading to their migration into drinking water supplies***.[252]

In short, there is no definitive evidence that mifepristone is "effectively removed by most modern wastewater treatment plants," nor that no harm is occurring. Quite the opposite: mifepristone has been detected in U.S. source and tap water, numerous scientific articles suggest it may cause harm, and, as recommended by numerous scientific research articles, further study is necessary.

4. Argument: Advanced and/or post-treatment processes at wastewater and drinking water treatment facilities can remove pharmaceuticals.

Response: As noted above, most wastewater treatment plants are conventional, not advanced,[253] as are most drinking water treatment plants.[254] Furthermore:

- While there are advanced treatment systems that can remove **certain** pharmaceuticals, they face numerous limitations—for example, some have higher operational costs, and, depending on the type of advanced treatment, can require high energy consumption and lead to "the formation of toxic by-products," which raises "significant environmental safety concerns."[255]

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[251] Jody McCreary, "Abortion Contaminants in the Water Supply: Are the Rumors True?"
[252] Manvendra Patel et al., "Pharmaceuticals of Emerging Concern in Aquatic Systems: Chemistry, Occurrence, Effects, and Removal Methods," *Chemical Reviews,* Vol. 119. No. 6, 2019, https://pubs.acs.org/doi/10.1021/acs.chemrev.8b00299.
[253] Lucía Fernández, "Distribution of publicly owned wastewater treatment works (POTWs) in the United States as of 2022, by treatment level," Statista.
[254] Ronnie Levin et al., "US drinking water quality: exposure risk profiles for seven legacy and emerging contaminants," *Nature Portfolio,* Vol. 34, September 22, 2023, https://pmc.ncbi.nlm.nih.gov/articles/PMC10907308/. Specifically, this study references the EPA's most recent Community Water System Survey, noting: "*Most US drinking water treatment plants provide conventional treatment including coagulation, sedimentation, sand filtration, and chlorination. EPA's most recent Community Water System Survey found that less than 10% of drinking water treatment plants use modern technologies such as ion exchange, granular activated carbon (GAC), ozone, UV disinfection, or membranes*." Also of note: "*The most widely applied water treatment technology, a combination of some or all of* ***coagulation***, ***flocculation*** *and* ***sedimentation***, *plus* ***filtration***, *has been used routinely for water treatment since the early part of the twentieth century*;" and as another source states, "*Conventional treatment plants use* ***coagulation***, ***sedimentation***, ***filtration*** *and* ***disinfection***, *and are common for surface water*." See: "Drinking Water Treatment Process Overview," Spartan Environmental Technologies, accessed January 5, 2026, https://spartanwatertreatment.com/drinking-water-treatment-overview/ and "What is a water treatment plant?" *Water World,* August 29, 2025, https://www.waterworld.com/what-is-articles/article/55313339/what-is-a-water-treatment-plant.
[255] Ojima Zechariah Wada and David Bamidele Olawade, "Recent occurrence of pharmaceuticals in freshwater, emerging treatment technologies, and future considerations: A review," Chemosphere, Vol. 374, April 2025,

- The costs of implementing and operating the more effective systems would likely be beyond what rural communities, particularly, could afford.[256]
- Even if this is pursued, it would take decades to fully implement across the United States. The U.S. Government should not be risking Americans' health by continuing to allow possible exposure to mifepristone metabolites while water treatment processes are updated. (Also of note: If removal of mifepristone and its active metabolites at the level of drinking water plants is pursued apart from seeking to update the treatment processes of WWTP, the potential harm to the environment remains).
- Such efforts still would not get rid of the disturbing reality that human fetal remains and related medical waste are daily being flushed into our wastewater systems, likely contributing to clogs and sewer system overflows,[257] and being processed at WWTP (which do not remove all organic waste, meaning it is likely that aborted human fetal remains are entering the water supply at a molecular level).[258]

5. Argument: While mifepristone may be in our water, the concentrations are so low that it won't affect animal or human health.

Response: Various scientific studies on mifepristone in our environment concur that mifepristone is in the water, it has the potential to bioaccumulate, and it presents a risk to both animal and human health. As noted above:

- Mifepristone blocks a vital fertility hormone, which accounts for its lethal nature. Combine with the fact that its active metabolites retain the ability of their parent drug to block the vital fertility hormone progesterone and, as (outlined above) most conventional waste and drinking water treatment plants do not fully remove these sorts of contaminants, one can conclude that active components of the abortion pill entering our water supplies may be causing harm to human health and fertility. Given we do not know what may happen over time to someone consuming

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https://www.sciencedirect.com/science/article/pii/S0045653525000955. This article specifically outlines that ". . .*high energy consumption is a notable drawback, particularly in pressure-driven systems like reverse osmosis, which require substantial energy inputs to maintain performance. Environmental concerns also arise from the disposal of concentrated brine or retentate, a by-product of the filtration process that contains high levels of contaminants. Improper disposal can lead to secondary environmental pollution*."

[256] "About Small Wastewater Systems," U.S. Environmental Protection Agency, March 31, 2025, https://www.epa.gov/small-and-rural-wastewater-systems/about-small-wastewater-systems.

[257] Per the EPA, sewer system overflow causes include "Inappropriate materials sent to the sewers — materials such as fats, oils and grease (FOG), and some 5 household products . . . such as baby wipes, facial wipes, sanitary pads, and tampons,"—aborted fetal remains are similar in nature to these materials. See: "Sanitary Sewer Overflow (SSO) Frequent Questions," U.S. Environmental Protection Agency, April 22, 2025, https://www.epa.gov/npdes/sanitary-sewer-overflow-sso-frequent-questions.

[258] See Liberty Counsel Action's white paper, "Abortion in Our Water: A Special Report," 2025, available at https://lcaction.org/LCAPDFs/AbortionInOurWater_Final01.pdf; Section 3, "Wastewater Treatment and Water Filtration Processes Incapable of Removing All Contaminants." This section details that approximately 10% of the organic matter in wastewater—which may include aborted fetal remains (consider, for example, microscopic fragments of skin or other organic fetal remains)—is not removed nor required to be, per the EPA's standards (see Point 4 and footnote 14).

trace amounts of these contaminants, clearly this lethal pill warrants a heightened level of scrutiny.

- As it pertains to animal health, several studies have linked exposure to mifepristone with harm. A 2019 study on the effects of mifepristone exposure on sea urchins aptly summarizes that it **represents "a danger for aquatic species**."[259]
- A 2024 scientific study on the analytical methods used to detect mifepristone in water states:

  "Mifepristone residues in the aquatic environment have recently grown to be one of the most alarming public health concerns. Mifepristone has the potential to be hazardous to aquatic's life and humans, and it has been linked to the fast growth of endocrine disruptors in the environment . . . Mifepristone is widely distributed in the environment, *and several studies that have been published using various analytical techniques demonstrate the ongoing interest in and intense level of research effort on this compound's presence in the environment."*[260]
- Furthermore, according to a Swedish source, "mifepristone is *not* readily biodegradable" (emphasis added)—rather, it "can be considered as slowly degraded in the environment."[261] (Other sources note biodegradation data is not available for mifepristone.[262] [263])

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[259] Adele Fabbrocini et al., "Mifepristone affects fertility and development in the sea urchin Paracentrotus lividus," *Molecular Reproduction and Development,* January 13, 2019, https://onlinelibrary.wiley.com/doi/full/10.1002/mrd.23112. Said study concluded that exposure to mifepristone "*caused a decrease in fertility and embryo development*" in female sea urchins, specifically reducing the percent of normally developed larvae.

[260] Tlou A Makwakwa, Dineo E Moema, Titus A M Msagati, "Multi-criteria decision analysis: technique for order of preference by similarity to ideal solution for selecting greener analytical method in the determination of mifepristone in environmental water samples," *Environmental Science and Pollution Research*, April 5, 2024, https://pmc.ncbi.nlm.nih.gov/articles/PMC11058867/.

[261] "Nordic Drugs AB | Mifegyne, Tablet 200 mg," FASS, accessed January 5, 2026, at https://fass.se/health/product/19920904000068 (see also https://fass.se/health/product/20100302000013). (Note: under the heading "Environmental impact," one must click "see detailed environmental information.") Specifically, as outlined above, this source states, "In an aerobic biodegradation study (28 days) in water Mifepristone was not considered as readily biodegradable (< 10 per cent degradation)." More specifically: "Mifepristone was exposed to two aerobic biologically active sediment systems (sediment A: high organic matter; sediment B: low organic matter). According to results, the DT50/DT90 values for Mifepristone are 4.5/14.9 days (water phase), 72.1/239.0 days (sediment phase) and 14.3/212.0 days (total system) for sediment system A and 4.1/13.5 days (water phase), 29.6/98.4 days (sediment phase) and 12.7/42.3 days (total system) for sediment system B. As the DT50 values are ≤ 72.1 days, Mifepristone can be considered as slowly degraded in the environment."

[262] See footnote 106.

[263] While those critical of concerns regarding mifepristone in the environment may point out that the same aforementioned Swedish source states, "Mifepristone has low potential for bioaccumulation," the National Library of Medicine's Biotechnology Center states that mifepristone's "potential for bioconcentration in aquatic organisms is very high." Ibid. Note: A study on pharmaceuticals generally likewise found that*, "Similar to the perceived harmful effects of plastic waste on humans and marine life, pharmaceuticals can be resistant to degradation, persistent pollutants in water bodies, lipophilic or water-soluble, and can be taken up by biota and bioaccumulate*." See: Zvanaka Mazhandu and Tebogo Mashifana, "Active pharmaceutical contaminants in drinking water: myth or fact?".

- Even if the former is true (that the potential for bioaccumulation is low), the *potential* for said bioaccumulation combined with the fact that mifepristone is *slowly degraded* in the environment and has a long half-life[264] suggests further study is warranted.
- We also know that other pharmaceuticals and similar contaminants (*such as those that, like the abortion pill mifepristone, may cause endocrine disruption, e.g., PFAS)* in our water may cause harm to wildlife and humans over time, even if consumed in trace amounts.[265] Even so, the possible effects pharmaceutical contaminants may cause over time have not been comprehensively studied, nor has the complex interaction of multiple pharmaceuticals and other contaminants been comprehensively studied for all possible combined effects [266] (particularly in children).[267] As outlined by the EPA:
    - Even though the "potential effects on public health and aquatic life" of pharmaceuticals "at the extremely low levels observed in drinking water and surface water" are uncertain, "concerns include hormone disruption, antibiotic resistance, and synergistic effects from the mixtures of various pharmaceutical compounds present in water."[268]
    - The EPA goes on to state that, "while observed levels of pharmaceutical compounds in streams may not be acutely toxic, the effects of discharges of pharmaceuticals on aquatic life can include **subtle and gradual effects**" (emphasis added), such as disruption in hormones that may affect growth, reproduction, and development.[269]

The risk that mifepristone will build up (bioaccumulate) in living aquatic organisms—particularly given it is not expected to readily degrade—is real.[270] When one considers that the drastic decrease in fertility across the U.S. correlates to the drastic increase in the use of chemical abortion pills, the

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[264] "The pharmacokinetics of mifepristone are characterised by rapid absorption, a long half-life of 25 to 30 hours and micromolar serum concentrations following ingestion of doses currently in clinical use." See: Oskari Heikinheimo, "Clinical Pharmacokinetics of Mifepristone," Clinical Pharmacokinetics, Vol. 33, July 1997, https://link.springer.com/article/10.2165/00003088-199733010-00002. See also: "PRODUCT INFORMATION - MS-2 Step," May 22, 2014, https://www.tga.gov.au/sites/default/files/auspar-mifepristone-misoprostol-141013-pi.pdf.

[265] See Liberty Counsel Action's white paper, "Abortion in Our Water: A Special Report," 2025, available at https://lcaction.org/LCAPDFs/AbortionInOurWater_Final01.pdf; Section 4, "*Impact of Emerging Contaminants: Pharmaceuticals and 'Forever Chemicals' in Our Environment Suggest Mifepristone Contamination Deserves Strict Scrutiny*." See also the following legislation recently introduced in Congress: "S.3460 - PFAS Accountability Act of 2025," Congress.gov, December 11, 2025, https://www.congress.gov/bill/119th-congress/senate-bill/3460/text.

[266] Ojima Zechariah Wada and David Bamidele Olawade, "Recent occurrence of pharmaceuticals in freshwater, emerging treatment technologies, and future considerations: A review." See also Manvendra Patel et al., "Pharmaceuticals of Emerging Concern in Aquatic Systems: Chemistry, Occurrence, Effects, and Removal Methods."

[267] "The MAHA Report | Make Our Children Healthy Again Assessment," The White House, accessed January 5, 2026, https://www.whitehouse.gov/wp-content/uploads/2025/05/WH-The-MAHA-Report-Assessment.pdf.

[268] "Health Services Industry Study Management and Disposal of Unused Pharmaceuticals (Interim Technical Report)," U.S. Environmental Protection Agency, August 2008, https://downloads.regulations.gov/EPA-HQ-OW-2006-0771-1694/content.pdf.

[269] Ibid.

[270] United States Environmental Protection Agency, "Toxics in the Food Web," June 2021, https://www.epa.gov/salish-sea/toxics-food-web. According to the EPA, *"Biomagnification is a process where substances increase as they are carried through from prey in in fatty tissues to its predator levels. This process can continue on and is called trophic magnification. Contaminants may only be found in small amounts at the lowest levels of food webs but can still have impacts on top predators that eat large quantities of other organisms in the food web through trophic magnification."*

logical conclusion is to call for further study to determine possible causation. In short, there is a clear risk that active abortion pill contaminants in our water negatively impact human health.

6. Argument: Chemical abortion has been effective for decades, is used to treat other things, and claims that it harms the environment are simply a means to control women's bodies.

Response: This is not about a woman's ability to choose. Indeed, she could still choose a surgical abortion (which is not only safer but likely reduces the trauma women may face, as they are unlikely to see the human fetal remains resulting from the abortion). Furthermore, there remains the matter of the FDA's historic negligence in failing to ensure the approval of mifepristone complied with state and local laws on water quality and medical waste (clear violations of the Clean Water Act and National Environmental Policy Act). This needs to be properly addressed both to ensure it does not happen again, as well as to ensure any adverse effects caused by these negligent actions are properly addressed.

Finally, some may point out that mifepristone is the active ingredient in Korlym, which is sometimes used to treat Cushing Syndrome. Specifically, Korlym is "indicated for people who have type 2 diabetes or glucose intolerance and for whom surgery is not an option or has failed to control their symptoms."[271] As it pertains to using Korlym (mifepristone) to treat Cushing Syndrome, consider the following:

1. About 70% of patients with Cushing syndrome have Cushing disease, and in these cases, surgery to remove the disease-causing tumor is "usually the first-line treatment" and "can cure the disease in up to 90% of patients."[272]
2. Per one expert, "Pills will never be better than surgery for adrenal Cushing's syndrome . . . since pills
    - Do not fix the underlying problem. The underlying problem is a tumor. The tumor does not disappear because you take a pill. It is like putting a Band-Aid on a large, bleeding artery. It does not fix the problem.
    - Are very toxic and have a lot of side effects.
    - Are highly expensive compared to surgery.

    . . . there are occasional times where these medications are useful. For instance:
    - The patient has very high cortisol levels and the doctor needs to control it (as a bridge) until surgery.
    - Korlym has some promising signs of lowering cortisol and reducing weight in patients with adrenal Cushing's syndrome making adrenal surgery more straightforward. Again, pills would be used as a bridge to adrenal surgery.

[271] See: Lindsey Shapiro, "Korlym (mifepristone) for Cushing's disease," Bionews, Inc., August 29, 2023, https://cushingsdiseasenews.com/korlym-mifepristone/.
[272] Marisa Wexler, MS, "Cushing's disease overview," Bionews, Inc., August 16, 2023, https://cushingsdiseasenews.com/what-is-cushings-disease/.

- In patients who have adrenal cancer that has spread, and surgery is no longer an option."[273]

3. Korlym is one of several medications used to treat Cushing's syndrome.[274]

In short, using Cushing syndrome to suggest one should not monitor or regulate mifepristone ignores the reality that in this context, it does not generate pathological waste, and it is relatively rare[275]—unlike mifepristone used for abortion, a usage which continues to increase annually.

For more responses to common opposing viewpoints, please see Liberty Counsel Action's resource addressing the "Top Ten Rebuttals to Common Arguments, available at: https://abortioninourwater.org/PDFs/AIOW/TopTenRebuttalstoCommonArguments-Jan2026.pdf.

Appendix 2: Supplementary Information on Evidence of Pharmaceuticals in Water

1. A 2024 study outlines: "*Numerous studies have demonstrated the inadequacy of conventional water treatment processes in removing active pharmaceutical ingredients (APIs) from the water. These pharmaceutical active compounds have been detected in treated wastewater, groundwater, and even drinking water sources. The presence of APIs in water resources poses a significant threat not only to aquatic organisms but also to human health. These emerging contaminants have the potential to disrupt endocrine systems, promote the development of antibiotic-resistant bacteria, and bioaccumulate in the food chain, ultimately leading to unacceptable risks to public health*."[276]
2. A 2022 study outlines: "*After ingestion, pharmaceuticals are excreted in urine and feces as active substances or metabolites (Sui et al., 2015; ausder Beek et al., 2016). These pharmaceuticals are present in both influent and effluent wastewater but can also be found in surface water bodies, including freshwater ecosystems and marine environments, as well as in groundwater due to effluent leachates generated under recharge conditions (Deo, 2014; Furlong et al., 2017; Ojemaye and Petrik, 2018; Reis-Santos et al., 2018; Fekadu et al., 2019;*

[273] Dr. Tobias Carling, "Top 5 Myths about Adrenal Cushing's Syndrome," Adrenal.com, November 23, 2021, https://www.adrenal.com/blog/top-5-myths-about-adrenal-cushing-s-syndrome.
[274] Rosario Pivonello, et al., "The Treatment of Cushing's Disease," *Endocrine Reviews,* Vol. 36, No. 4, August 10, 2015, December 2023, https://academic.oup.com/edrv/article-abstract/36/4/385/2354703?redirectedFrom=fulltext. See also: "Cushing Syndrome," Cleaveland Clinic, 12/27/2022, https://my.clevelandclinic.org/health/diseases/5497-cushing-syndrome; Martin Reincke, MD, and Maria Fleseriu, MD, "Cushing Syndrome | A Review," JAMA, Vol. 330, No. 2, July 11, 2023, https://jamanetwork.com/journals/jama/fullarticle/2807073.
[275] Sarah Jane Tribble, "How A Drugmaker Turned The Abortion Pill Into A Rare-Disease Profit Machine," KFF Health News, April 10, 2018, https://kffhealthnews.org/news/how-a-drugmaker-turned-the-abortion-pill-into-a-rare-disease-profit-machine/.
[276] Zvanaka Mazhandu and Tebogo Mashifana, "Active pharmaceutical contaminants in drinking water: myth or fact?," DARU Journal of Pharmaceutical Sciences, September 18, 2024, https://link.springer.com/article/10.1007/s40199-024-00536-9.

Letsinger et al., 2019; Zainab et al., 2020). The main concern is that conventional treatment plants are ineffective in removing some of these emerging contaminants (ECs).”[277]

3. Another 2022 study states: “*With the increase in demand of Pharmaceuticals and Personal Care Products (PPCPs), there has been a sharp increase of these pollutants in water bodies. This is mainly due to the inefficiency of conventional wastewater treatment plants in treatment and removal of these PhACs* [pharmaceutically active substances].”[278]
4. A 2019 study states: “***Wastewater treatment plants (WWTPs) were never designed for and do not completely remove pharmaceuticals,”***[279] and while *“Pharmaceuticals have long been present in the environment . . . their detection and hazardous effects have only emerged in the past 2–3 decades.* ***Despite many publications on this topic, their individual*** *and combined* ***acute and chronic effects on . . . humans are not well understood****. . .****Primary and secondary WWTP treatments generally are unable to remove these pollutants, leading to their migration into drinking water supplies****.”*[280]

[277] Maite Ortúzar et al., “Pharmaceutical Pollution in Aquatic Environments: A Concise Review of Environmental Impacts and Bioremediation Systems,” *Frontiers in Microbiology,* Vol. 13, April 26, 2022, https://www.frontiersin.org/journals/microbiology/articles/10.3389/fmicb.2022.869332/full.
[278] Kundan Samal, Saswat Mahapatra, and Md Hibzur Ali, “Pharmaceutical wastewater as Emerging Contaminants (EC): Treatment technologies, impact on environment and human health,” Energy Nexus, Vol. 6, June 16, 2022, https://www.sciencedirect.com/science/article/pii/S2772427122000390.
[279] Manvendra Patel et al., “Pharmaceuticals of Emerging Concern in Aquatic Systems: Chemistry, Occurrence, Effects, and Removal Methods,” Chemical Reviews, Vol. 119. No. 6, 2019, https://pubs.acs.org/doi/10.1021/acs.chemrev.8b00299.
[280] Ibid.