

RESOLUTION NO. 3170

A RESOLUTION OF THE CITY OF SALISBURY, MARYLAND AUTHORIZING THE MAYOR TO EXECUTE A “LEGAL SERVICES AGREEMENT” WITH THE LAW FIRMS OF BARON & BUDD, P.C., COSSICH, SUMICH, PARSIOLA & TAYLOR LLC AND MACLEOD LAW GROUP, LLC FOR REPRESENTATION OF THE CITY OF SALISBURY IN LITIGATION ARISING FROM CONTAMINATION OF PUBLIC DRINKING WATER, AND POSSIBLY THE WASTEWATER TREATMENT PLANT, BY PRODUCTS CONTAINING PERFLUOROALKYL SUBSTANCES (“PFAS”).

RECITALS

WHEREAS, our federal and state governments have recognized that certain chemicals, specifically those found in firefighting foam products (known as “aqueous film forming foam” or “AFFF”) and/or other products containing perfluoroalkyl substances (“PFAS”)(including perfluorooctanoic acid (“PFOA” or “C8”), perfluorooctane sulfonate (“PFOS”), and related compounds, can produce harmful health effects; and

WHEREAS, such chemicals, hereinafter collectively referred to as “PFAS”, have been found in the City of Salisbury’s drinking water and are believed to also be present in the surrounding soils and wastewater treatment plant, subject to further testing and

WHEREAS, the presence of PFAS in the drinking water and/or wastewater treatment plant will require the installation of costly treatment protocols; and

WHEREAS, the City of Salisbury desires to retain legal representation to engage further testing and, if necessary, file suit against the manufacturers of the PFAS present in the drinking water and/or wastewater treatment plant; and

WHEREAS, any proceeds received as a result of the filing of suit, whether in the form of a settlement or judgment, will be used to offset the costs of the treatment of PFAS; and

WHEREAS, the law firms of Baron & Budd, P.C., Cossich, Sumich, Parsiola & Taylor LLC and Macleod Law Group, LLC have presented for review and consideration the Legal Services Agreement attached hereto as **Exhibit 1**, which exhibit is incorporated as if fully set forth herein.

NOW, THEREFORE, BE IT RESOLVED BY THE COUNCIL OF THE CITY OF SALISBURY as follows:

Section 1. The Mayor is authorized to execute and enter into the attached Legal Services Agreement on behalf of the City of Salisbury, Maryland.

AND, BE IT FURTHER RESOLVED BY THE COUNCIL OF THE CITY OF SALISBURY AS FOLLOWS:

Section 2. It is the intention of the Council of the City of Salisbury that each provision of this Resolution shall be deemed independent of all other provisions herein.

Section 3. It is further the intention of the Council of the City of Salisbury that if any section, paragraph, subsection, clause or provision of this Resolution shall be adjudged invalid, unconstitutional or

otherwise unenforceable under applicable Maryland or federal law, such adjudication shall apply only to the section, paragraph, subsection, clause or provision so adjudged and all other provisions of this Resolution shall remain and shall be deemed valid and enforceable

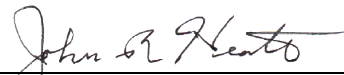
Section 4. The Recitals set forth hereinabove are incorporated into this section of this Resolution as if such recitals were specifically set forth at length in this Section 4.

THIS RESOLUTION was duly passed at a meeting of the Council of the City of Salisbury held on May 23, 2022, and is to become effective immediately upon adoption.

ATTEST:




Kimberly R. Nichols, City Clerk



**John R. Heath, President
Salisbury City Council**

APPROVED BY ME THIS:

25 day of May, 2022



**Julia Glanz, City Administrator, for and at
the direction of Jacob R. Day, Mayor**

LEGAL SERVICES AGREEMENT

1. IDENTIFICATION OF PARTIES. This Agreement is made between the City of Salisbury, Maryland (“Client”) and the law firms of Baron & Budd, P.C., Cossich, Sumich, Parsiola & Taylor, LLC, and MacLeod Law Group, LLC (collectively referred to as “Attorneys”).
2. RETENTION OF FIRM RATHER THAN PARTICULAR ATTORNEY. By signing this Agreement, Client retains the law firms. Attorney services will be provided to Client by the firms and will not necessarily be performed by any particular attorney.
3. AUTHORIZED REPRESENTATIVE OF CLIENT. Client designates Heather R. Konyar, Esq., as the authorized representative to direct Attorneys and to be the primary individual to communicate with Attorneys regarding the subject matter of Attorneys’ representation of Client under this Agreement. This designation is intended to establish a clear line of authority and to minimize potential uncertainty, but not to preclude communication between Attorneys and other representatives of Client.
4. SCOPE AND DUTIES. Attorneys will provide legal services to Client with respect to damages, compensation, and other relief to which Client may be entitled as a result of an Action to be filed by Attorneys on behalf of Client against the manufacturer(s) of firefighting foam products (known as “aqueous film forming foam” or “AFFF”) and/or other products containing perfluoroalkyl substances (“PFAS”) (including perfluorooctanoic acid (“PFOA” or “C8”), perfluorooctane sulfonate (“PFOS”), and any other related compounds). Client hires Attorneys to provide legal services in connection with pursuing claims against all those responsible for damages Client suffered or will suffer. Attorneys shall provide those legal services reasonably required to represent Client, and shall take reasonable steps to keep Client informed of progress and to respond to Client’s inquiries. Client shall be truthful with Attorneys, cooperate with Attorneys, and keep Attorneys informed of any and all factual developments.
5. LEGAL SERVICES SPECIFICALLY EXCLUDED. Unless otherwise agreed in writing by Client and Attorneys, Attorneys will not provide legal services with respect to (a) defending any legal proceeding or claim against the Client commenced by any person unless such proceeding or claim is filed against the Client in the Action or (b) proceedings before any federal or state administrative or governmental agency, department, or board including, but not limited to, the United States Environmental Protection Agency. With Client’s permission, however, Attorneys may elect to appear at such administrative proceedings to protect Client’s rights. If Client wishes to retain Attorneys to provide any legal services not provided under this Agreement for additional compensation, a separate written agreement between Attorneys and Client will be required.
6. JOINT RESPONSIBILITY. Baron & Budd, P.C., Cossich, Sumich, Parsiola & Taylor LLC, and MacLeod Law Group, LLC assume joint legal responsibility to Client for the representation described in this Agreement, and agree to be available for consultation with the client. Client approves of and consents to the participation of the firms in their representation.

7. ATTORNEYS' FEES. Client and Attorneys have agreed that Client will pay Attorneys a contingent fee for representing Client in this matter. The fee is not set by law but is negotiable between Attorneys and Client. Attorneys and Client agree that the contingent fee will be calculated as described below.

A. Calculation of Contingent Fee

Attorneys will receive a contingency fee of twenty-five percent (25%) of any gross recovery (as defined below).

The contingent fee is to be calculated based on Client's gross recovery before deduction of costs and expenses (as defined below).

The contingent fee is calculated by multiplying the gross recovery by the fee percentage.

B. Definitions

"Costs" and "Expenses" include, but are not limited to, the following: process servers' fees, court reporters' fees, document management costs, messenger and other delivery fees, parking, investigation expenses, consultants' fees, expert witness fees, expert fees, fees fixed by law or assessed by courts or other agencies, and other similar items, incurred by Attorneys in the course of representing Client.

"Document Management Costs" are the costs associated with collecting, copying, and storing documents relevant to the Action as discussed in paragraph 8, below. These costs include processing and hosting charges, hardware, software, and any other resources necessary to manage documents.

"Gross recovery" means the total recovery, whether obtained by settlement, arbitration award, court judgment following trial or appeal, or otherwise. "Gross recovery" shall include, without limitation, the following: (1) the then-present value of any monetary payments to be made to Client; and (2) the fair market value of any non-monetary property and services to be transferred and/or rendered for the benefit of Client; and (3) any attorney's fees recovered by Client as part of any cause of action that provides a basis for such an award. "Gross recovery" may come from any source, including, but not limited to, the adverse parties to the Action and/or their insurance carriers and/or any third party, whether or not a party to the Action.

If Client and Attorneys disagree as to the fair market value of any non-monetary property or services as described above, Attorneys and Client agree that a binding appraisal will be conducted to determine this value. However, regardless of the results of the binding appraisal, the fee associated with non-monetary property or services transferred or rendered for the benefit of the Client shall not, in any case, exceed the amount of the monetary

payments made to the Client as part of the governing settlement or judgment. It is possible that payment to the Client by the adverse parties to the Action or their insurance carrier(s) or any third-party may be deferred, as in the case of an annuity, a structured settlement, or periodic payments. In such event, gross recovery will consist of the initial lump sum payment plus the present value (as of the time of the settlement) of the total of all payments to be received thereafter. The contingent fee is calculated, as described above, by multiplying the net recovery by the fee percentage. The Attorneys' fees will be paid out of the initial lump-sum payment if there are sufficient funds to satisfy the Attorneys' fee. If there are insufficient funds to pay the Attorneys' fees in full from the initial lump sum payment, the balance owed to Attorneys will be paid from subsequent payments to Client before there is any distribution to Client.

C. Reasonable Fee if Contingent Fee is Unenforceable or if Attorney is Discharged Before Any Recovery.

In the event that the contingent fee portion of this agreement is determined to be unenforceable for any reason or the Attorneys are prevented from representing Client on a contingent fee basis, Client agrees to pay a reasonable fee for the services rendered. If the parties are unable to agree on a reasonable fee for the services rendered, Attorneys and Client agree that the fee will be determined by arbitration proceedings before a neutral affiliated with the Judicial Arbitration and Mediation Services (JAMS); in any event, Attorneys and Client agree that the fee determined by arbitration shall not exceed twenty-five percent (25%) of the gross recovery as defined in this agreement. If there is no recovery by Client, no fee will be due to Attorneys.

D. Order or Agreement for Payment of Attorneys' Fees or Costs by Another Party.

If a court orders, or the parties to the dispute agree, that another party shall pay some or all of Client's attorneys' fees, costs, or both, Attorneys shall be entitled to the greater of (i) the amount of any attorney's fees awarded by the court or included in the settlement or (ii) the percentage or other formula applied to the recovery amount not including such attorney's fees.

8. COSTS AND EXPENSES.

A. General

In addition to paying legal fees, Client authorizes Attorneys to incur all reasonable costs and expenses and to hire any investigators, consultants, or expert witnesses. If Attorneys incur such expenses related specifically to the Client's individual case, Attorneys will obtain consent and seek advice from Client before incurring such expenses. Attorneys will advance all costs and expenses. Attorneys will deduct those costs and expenses out of Client's recovery after attorney's fees have been deducted. If there is no recovery, Client will not be required to reimburse Attorneys for costs and fees. In the event a recovery is less than incurred costs and expenses, Client will not be required to reimburse Attorneys for costs/expenses, above and beyond the recovery, and fees.

B. Document Management Costs

Attorneys have explored two means of managing litigation documents:

(1) Outsource to outside vendor. Attorneys contract with outside vendors to collect, copy, and store documents. Attorneys advance these costs, and Client reimburses Attorneys out of any recovery.

(2) Internal processing. Attorneys can create an internal document management system by obtaining computer software, hardware, and related resources necessary to collect, copy, store, organize, and produce documents and data. This option obviates the need to outsource this work to an outside vendor.

Attorneys represent that the second option above, internal processing, is the better choice for promoting efficiency, saving Client costs, and limiting legal expenses. Client agrees that Attorneys may purchase the resources necessary to provide an internal document management system for Client, subject to cost review and approval by Client in advance of incurring any such costs. Attorneys may, however, use outside vendors where costs or circumstances warrant.

9. SHARED EXPENSES. Client understands that Attorneys may incur certain expenses that jointly benefit multiple clients, including, for example, expenses for travel, experts, and copying. Client agrees that Attorneys may, in their discretion, divide such expenses equally or pro rata among such clients, and deduct Client's portion of those expenses from Client's share of any recovery. Prior client approval is not required for shared expenses. Nevertheless, Client shall only be responsible for prudent, fair and reasonable expenses.

10. DIVISION OF ATTORNEYS' FEES. At the conclusion of the case, if a recovery is made on behalf of Client, Client understands and agrees that the total Attorneys' fee will be divided as follows:

Baron & Budd, P.C. will receive forty-two and one-half percent (42.5%), Cossich, Sumich, Parsiola & Taylor, LLC will receive forty-two and one-half percent (42.5%), and MacLeod Law Group, LLC will receive fifteen percent (15%).

11. MULTIPLE REPRESENTATIONS. Client understands that Attorneys do or may represent many other individuals with actual or potential PFAS related litigation claims. Attorneys' representation of multiple claimants at the same time may create certain actual or potential conflicts of interest in that the interests and objectives of each client individually on certain issues are, or may become, inconsistent with the interests and objectives of the other. Attorneys are governed by specific rules and regulations relating to professional responsibility in representation of clients, and especially where conflicts of interest may arise from representation of multiple clients against the same or similar defendants, Attorneys must advise clients of any actual or potential conflicts of

interest and obtain their informed written consent to our representation when actual, present, or potential conflicts of interest exist. Client has conferred with its own separate corporate or municipal counsel, and has determined that it is in its own best interests to waive any and all potential or actual conflicts of which Client is currently aware as the result of Attorneys' current and continuing representation of other entities in similar litigation. By signing this agreement, Client states that (1) it has been advised of the potential conflicts of interest which may be or are associated with our representation of Client and other multiple claimants; (2) it nevertheless wants Attorneys to represent Client; and (3) Client consents to Attorneys' representation of others in connection with PFAS litigation (AFFF or otherwise). Client remains completely free to seek other legal advice at any time even after signing this agreement.

12. **POWER OF ATTORNEY.** Client gives Attorneys a power of attorney to execute all reasonable and necessary documents connected with the handling of the litigation associated with this cause of action. Prior to signing any documents relative to settlement agreements, compromises and releases, Attorneys will confer with and advise Client of the contents and ramifications of such documents. Under no circumstances will Client's claims be settled without obtaining Client's advance consent.

13. **SETTLEMENT.** Attorneys will not settle Client's claim without the advance approval of Client, who will have the absolute right to accept or reject any settlement. Attorneys will notify Client promptly of the terms of any settlement offer received by Attorneys.

14. **AGGREGATE SETTLEMENTS.** Often times in cases where Attorneys represent multiple clients in similar litigation, the opposing parties or defendants attempt to settle or otherwise resolve all of Attorneys' cases in a group or groups, by making a single settlement offer to settle a number of cases simultaneously. There exists a potential conflict of interest whenever a lawyer represents multiple clients in a settlement of this type because it necessitates choices concerning the allocation of limited settlement amounts among the multiple clients. However, if all clients consent, a group settlement can be accomplished and a single offer can be fairly distributed among the clients by assigning settlement amounts based upon the strengths and weaknesses of each case, the relative nature, severity and extent of injuries, and individual case evaluations. In the event of a group or aggregate settlement proposal, Attorneys may implement a settlement program, overseen by a referee or special master, who may be appointed by a court, designed to ensure consistency and fairness for all claimants, and which will assign various settlement values and amounts to each client's case depending upon the facts and circumstances of each individual case. Client authorizes Attorneys to enter into and engage in group settlement discussions and agreements that may include Client's individual claims. Although Client authorizes Attorneys to engage in such group settlement discussions and agreements, Client retains the right to approve any settlement of Client's claims, and Attorneys are required to obtain Client's approval before settling Client's claims.

15. **ATTORNEYS' LIEN.** Attorneys will have a lien for attorneys' fees and costs advanced on all claims and causes of action that are the subject of the representation of Client under this Agreement and on all proceeds of any recovery obtained (whether by settlement, arbitration award, or court judgment). If no recovery is obtained for Client, or if a lien is obtained that exceeds the recovery by the Client, any lien in excess of the recovery for Client shall be released by Attorneys.

16. **DISCHARGE OF ATTORNEYS.** Client may discharge Attorneys at any time by written notice effective when received by Attorneys. Unless specifically agreed by Attorneys and Client, Attorneys will provide no further services and advance no further costs on Client's behalf after receipt of the notice. If Attorneys appear as Client's attorneys of record in any proceeding, Client will execute and return a substitution-of-attorney form immediately on its receipt from Attorneys. In the event that Attorneys are discharged, for whatever reason, Attorneys and Client agree that Attorneys will have a lien for attorneys' fees and costs advanced on all claims and causes of action that are the subject of the representation of Client under this Agreement and on all proceeds of any recovery obtained (whether by settlement or court judgment). If no recovery is obtained for Client or if a lien is obtained that exceeds the recovery by the Client then any lien in excess of the recovery for Client shall be released by Attorneys.

17. **WITHDRAWAL OF ATTORNEYS.** Client and Attorneys agree that if, after investigation of the facts and research of the law, Attorneys believe that Client's claims are of limited merit, Attorneys may terminate this agreement with Client prior to and without filing suit. Termination releases Attorneys from any further action on Client's claim and discharges Attorneys from this Agreement. Termination will be effected via delivery service with signature receipt to the last address provided by Client to Attorneys. After filing suit, Attorneys may withdraw with Client's consent as permitted under the governing Rules of Professional Conduct. The circumstances under which the Rules permit such withdrawal include, but are not limited to, the following: (a) the representation will result in violation of the rules of professional conduct or other law; (b) if withdrawal can be accomplished without material adverse effect on the interests of Client; (c) if Client persists in a course of action involving Attorneys' services that Attorneys reasonably believe is criminal or fraudulent or if Client has used Attorneys' services to perpetrate a crime or fraud; (d) if Client insists upon pursuing an objective that Attorneys consider repugnant or imprudent; (e) if Client fails substantially to fulfil an obligation to Attorneys regarding Attorneys' services and has given reasonable warning that Attorneys will withdraw unless the obligation is fulfilled; (f) the representation will result in an unreasonable financial burden on Attorneys; or (g) if other good cause for withdrawal exists. Upon termination of representation, Attorneys shall take steps to the extent reasonably practicable to protect Client's interests, will give reasonable notice to Client, will allow time for employment of other counsel, will surrender papers and property to which Client is entitled, and will refund any advance payment of fee that has not been earned. Notwithstanding Attorneys' withdrawal, Attorneys and Client agree that in all such cases described herein above, Attorneys will have a lien for attorneys' fees and costs advanced on all claims and causes of action that are the subject of the representation of Client under this Agreement and on all proceeds of any recovery obtained (whether by settlement or court judgment). If no recovery is obtained for Client or if a lien is obtained that exceeds the recovery by the Client any lien in excess of the recovery for Client shall be released by Attorneys.

18. **RELEASE OF CLIENT'S PAPERS AND PROPERTY.** At the termination of services under this Agreement, Attorneys will release promptly to Client on request all of Client's papers and property. "Client's paper and property" includes correspondence, deposition transcripts, exhibits, experts' reports, legal documents, physical evidence, and other items reasonably necessary to Client's representation, whether Client has paid for them or not.

19. **INDEPENDENT CONTRACTOR.** The relationship to Client of Attorneys, and any associate counsel or paralegal provided through Attorneys, in the performance of services under this Agreement is that of Client to independent contractor and not that of Client to employee. No other wording in this Agreement shall stand in derogation of this subparagraph. The fees and costs paid to Attorneys for legal services rendered pursuant to this Agreement shall be deemed revenues of their law office practices and not as remuneration for individual employment apart from the business of that law office.

20. **NOTICES.** Client agrees to receive communications and documents from Attorneys via email. Attorneys agree to receive communications and documents from Client via email. In the event that Client needs to send hardcopy documents or other physical materials, Client agrees to send those to Attorneys at the following addresses:

Baron & Budd, P.C.
3102 Oak Lawn Ave., Suite 1100
Dallas, Texas 75219

Cossich, Sumich, Parsiola & Taylor LLC
8397 Highway 23, Suite 100
Belle Chasse, Louisiana 70037

MacLeod Law Group, LLC
110 N. Cross Street
Chestertown, Maryland 21620

21. **DISCLAIMER OF GUARANTEE.** Although Attorneys may offer an opinion about possible results regarding the subject matter of this Agreement, Attorneys cannot guarantee any particular result. Client acknowledges that Attorneys have made no promises about the outcome and that any opinion offered by Attorneys in the future will not constitute a promise, guarantee, or warranty.

22. **ENTIRE AGREEMENT.** This Agreement contains the entire agreement of the parties. No other agreement, statement, or promise made on or before the effective date of this Agreement will be binding on the parties.

23. **SEVERABILITY IN EVENT OF PARTIAL INVALIDITY.** If any provision of this Agreement is held in whole or in part to be unenforceable for any reason, the remainder of that provision and of the entire Agreement will be severable and remain in effect.

24. **MODIFICATION BY SUBSEQUENT AGREEMENT.** The parties may agree to modify this Agreement by executing a new written agreement.

25. **DISPUTES ARISING UNDER AGREEMENT.** Client and Attorneys agree that any controversy, claim, or dispute (including issues relating to the fee) arising out of or relating to this

Agreement, its performance, and/or its breach will be resolved by arbitration proceedings before a neutral associated with the Judicial Arbitration and Mediation Services (JAMS). Disagreement as to the fair market value of any non-monetary property or services, however, will be resolved in accordance with paragraph 7.B.

26. **ATTORNEY'S FEES AND COSTS IN ACTION ON AGREEMENT.** The prevailing party in any action or proceeding to enforce any provision of this Agreement will be awarded reasonable attorney's fees and costs incurred in that action or proceeding or in efforts to negotiate the matter.

27. **EFFECTIVE DATE OF AGREEMENT.** This Agreement is effective when the Client signs the Agreement. This Agreement applies to any services provided by Attorneys before its effective date.

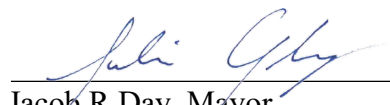
28. **MULTIPLE COUNTERPARTS.** This Agreement will be effective whether or not executed in multiple counterparts.

29. **CHOICE OF LAW AND RULES OF CONDUCT.** This Agreement shall be governed by and construed under the laws of the State of Maryland; and this Agreement and its performance are subject to the Louisiana Rules of Professional Conduct, the Texas Disciplinary Rules of Professional Conduct, and the Maryland Attorneys' Rules of Professional Conduct.

Agreed to by:

Date: May 25, 2022

CLIENT



Jacob R Day, Mayor
City of Salisbury, Maryland

Signature

Signatures of Attorneys on Next Page

ATTORNEYS

BARON & BUDD, P.C.

Scott Summy

Date: _____

COSSICH, SUMICH, PARSIOLA & TAYLOR LLC

Phil Cossich

Date: _____

MACLEOD LAW GROUP, LLC

Charles D. MacLeod

Date: _____



MEMORANDUM

To: Julia Glanz, City Administrator
From: Cori Cameron, Director of Water Works
Subject: PFAS Ordinance enter into Legal Services Agreement
Date: May 23, 2022

The Department of Water Works is recommending the City of Salisbury enter into a Legal Services Agreement thru the City's current law firm of CBM with the law firms named in the attached Legal Services Agreement. The purpose of this law suit is to receive funding from manufacturers of products that contributed to PFAS leaching into the City's water system. Preliminary testing of this non-regulated contaminant from Salisbury's water system, measuring Total PFOA/PFOS, showed results of 14.72 ppt (parts per trillion) in the Park well field and 3.37 ppt in the Paleo Well Field.

PFAS are a group of manufactured chemicals that have been used in industry and consumer products since the 1940's because of their useful properties. There are thousands of different PFAS, some of which have been more widely used and studied than others. Perfluorooctanoic Acid (PFOA) and Perfluorooctane Sulfonate (PFOS), for example, are two of the most widely used and studied chemicals in the PFAS group. PFOA and PFOS have been replaced in the United States with other PFAS in recent years. One common characteristic of PFAS is that many break down very slowly and can build up in people, animals, and the environment over time.

The USEPA has a plan is to establish a National Primary Drinking Water Regulation for PFOA and PFOS. The proposed rule is expected in the Fall of 2022, with final rule expected in Fall of 2023. Individual states may set limits more stringent than the USEPA limit but must enforce at least at the USEPA limit. Some states have already set stringent limits for PFAS in water systems.

Entering into this agreement will help to provide funding for future treatment techniques needed to treat and prevent PFAS contamination in our water system. There is also the possibility of developing future wells if current wells need to be abandoned or require extensive treatment. By entering into this agreement now, The City of Salisbury will show the consumers of our water that we are being proactive on addressing the source of contamination and preparing to comply with the upcoming National Primary Drinking Water Regulation that will be set for PFAS in the near future.



City of
Salisbury
Jacob R. Day, Mayor

MEMORANDUM

Overview

EPA has established health advisories for PFOA and PFOS based on the agency's assessment of the latest peer-reviewed science to provide drinking water system operators, and state, tribal and local officials who have the primary responsibility for overseeing these systems, with information on the health risks of these chemicals, so they can take the appropriate actions to protect their residents. EPA is committed to supporting states and public water systems as they determine the appropriate steps to reduce exposure to PFOA and PFOS in drinking water. As science on health effects of these chemicals evolves, EPA will continue to evaluate new evidence.

Background on PFOA and PFOS

PFOA and PFOS are fluorinated organic chemicals that are part of a larger group of chemicals referred to as perfluoroalkyl substances (PFASs). PFOA and PFOS have been the most extensively produced and studied of these chemicals. They have been used to make carpets, clothing, fabrics for furniture, paper packaging for food and other materials (e.g., cookware) that are resistant to water, grease or stains. They are also used for firefighting at airfields and in a number of industrial processes.

Because these chemicals have been used in an array of consumer products, most people have been exposed to them. Between 2000 and 2002, PFOS was voluntarily phased out of production in the U.S. by its primary manufacturer. In 2006, eight major companies voluntarily agreed to phase out their global production of PFOA and PFOA-related chemicals, although there are a limited number of ongoing uses. Scientists have found PFOA and PFOS in the blood of nearly all the people they tested, but these studies show that the levels of PFOA and PFOS in blood have been decreasing. While consumer products and food are a large source of exposure to these chemicals for most people, drinking water can be an additional source in the small percentage of communities where these chemicals have contaminated water supplies. Such contamination is typically localized and associated with a specific facility, for example, an industrial facility where these chemicals were produced or used to manufacture other products or an airfield at which they were used for firefighting.

EPA's 2016 Lifetime Health Advisories

EPA develops health advisories to provide information on contaminants that can cause human health effects and are known or anticipated to occur in drinking water. EPA's health advisories are non-enforceable and non-regulatory and provide technical information to states agencies and other public health officials on health effects, analytical methodologies, and treatment technologies associated with drinking water contamination. In 2009, EPA published provisional health advisories for PFOA and PFOS based on the evidence available at that time. The science has evolved since then and EPA is now replacing the 2009 provisional advisories with new, lifetime health advisories.

FACT SHEET

PFOA & PFOS Drinking Water Health Advisories

EPA's 2016 Lifetime Health Advisories, continued

To provide Americans, including the most sensitive populations, with a margin of protection from a lifetime of exposure to PFOA and PFOS from drinking water, EPA established the health advisory levels at 70 parts per trillion. When both PFOA and PFOS are found in drinking water, the combined concentrations of PFOA and PFOS should be compared with the 70 parts per trillion health advisory level. This health advisory level offers a margin of protection for all Americans throughout their life from adverse health effects resulting from exposure to PFOA and PFOS in drinking water.

How the Health Advisories were developed

EPA's health advisories are based on the best available peer-reviewed studies of the effects of PFOA and PFOS on laboratory animals (rats and mice) and were also informed by epidemiological studies of human populations that have been exposed to PFASs. These studies indicate that exposure to PFOA and PFOS over certain levels may result in adverse health effects, including developmental effects to fetuses during pregnancy or to breastfed infants (e.g., low birth weight, accelerated puberty, skeletal variations), cancer (e.g., testicular, kidney), liver effects (e.g., tissue damage), immune effects (e.g., antibody production and immunity), thyroid effects and other effects (e.g., cholesterol changes).

EPA's health advisory levels were calculated to offer a margin of protection against adverse health effects to the most sensitive populations: fetuses during pregnancy and breastfed infants. The health advisory levels are calculated based on the drinking water intake of lactating women, who drink more water than other people and can pass these chemicals along to nursing infants through breastmilk.

Recommended Actions for Drinking Water Systems

Steps to Assess Contamination

If water sampling results confirm that drinking water contains PFOA and PFOS at individual or combined concentrations greater than 70 parts per trillion, water systems should quickly undertake additional sampling to assess the level, scope and localized source of contamination to inform next steps

Steps to Inform

If water sampling results confirm that drinking water contains PFOA and PFOS at individual or combined concentrations greater than 70 parts per trillion, water systems should promptly notify their State drinking water safety agency (or with EPA in jurisdictions for which EPA is the primary drinking water safety agency) and consult with the relevant agency on the best approach to conduct additional sampling.

Drinking water systems and public health officials should also promptly provide consumers with information about the levels of PFOA and PFOS in their drinking water. This notice should include specific information on the risks to fetuses during pregnancy and breastfed and formula-fed infants from exposure to drinking water with an individual or combined concentration of PFOA and PFOS above EPA's health advisory level of 70 parts per trillion. In addition, the notification should include actions they are taking and identify options that consumers may consider to reduce risk such as seeking an alternative drinking water source, or in the case of parents of formula-fed infants, using formula that does not require adding water.

FACT SHEET

PFOA & PFOS Drinking Water Health Advisories

Recommended Actions for Drinking Water Systems, continued

Steps to Limit Exposure

A number of options are available to drinking water systems to lower concentrations of PFOA and PFOS in their drinking water supply. In some cases, drinking water systems can reduce concentrations of perfluoroalkyl substances, including PFOA and PFOS, by closing contaminated wells or changing rates of blending of water sources. Alternatively, public water systems can treat source water with activated carbon or high pressure membrane systems (e.g., reverse osmosis) to remove PFOA and PFOS from drinking water. These treatment systems are used by some public water systems today, but should be carefully designed and maintained to ensure that they are effective for treating PFOA and PFOS. In some communities, entities have provided bottled water to consumers while steps to reduce or remove PFOA or PFOS from drinking water or to establish a new water supply are completed.

Many home drinking water treatment units are certified by independent accredited third party organizations against American National Standards Institute (ANSI) standards to verify their contaminant removal claims. NSF International (NSF®) has developed a protocol for NSF/ANSI Standards 53 and 58 that establishes minimum requirements for materials, design and construction, and performance of point-of-use (POU) activated carbon drinking water treatment systems and reverse osmosis systems that are designed to reduce PFOA and PFOS in public water supplies. The protocol has been established to certify systems (e.g., home treatment systems) that meet the minimum requirements. The systems are evaluated for contaminant reduction by challenging them with an influent of $1.5 \pm 30\%$ µg/L (total of both PFOA and PFOS) and must reduce this concentration by more than 95% to 0.07 µg/L or less (total of both PFOA and PFOS) throughout the manufacturer's stated life of the treatment system. Product certification to this protocol for testing home treatment systems verifies that devices effectively reduces PFOA and PFOS to acceptable levels.

Other Actions Relating to PFOA and PFOS

Between 2000 and 2002, PFOS was voluntarily phased out of production in the U.S. by its primary manufacturer, 3M. EPA also issued regulations to limit future manufacturing, including importation, of PFOS and its precursors, without first having EPA review the new use. A limited set of existing uses for PFOS (fire resistant aviation hydraulic fluids, photography and film products, photomicro lithography process to produce semiconductors, metal finishing and plating baths, component of an etchant) was excluded from these regulations because these uses were ongoing and alternatives were not available.

In 2006, EPA asked eight major companies to commit to working toward the elimination of their production and use of PFOA, and chemicals that degrade to PFOA, from emissions and products by the end of 2015. All eight companies have indicated that they have phased out PFOA, and chemicals that degrade to PFOA, from emissions and products by the end of 2015. Additionally, PFOA is included in EPA's proposed Toxic Substance Control Act's Significant New Use Rule (SNUR) issued in January 2015 which will ensure that EPA has an opportunity to review any efforts to reintroduce the chemical into the marketplace and take action, as necessary, to address potential concerns.

FACT SHEET

PFOA & PFOS Drinking Water Health Advisories

Other Actions Relating to PFOA and PFOS, continued

EPA has not established national primary drinking water regulations for PFOA and PFOS. EPA is evaluating PFOA and PFOS as drinking water contaminants in accordance with the process required by the Safe Drinking Water Act (SDWA). To regulate a contaminant under SDWA, EPA must find that it: (1) may have adverse health effects; (2) occurs frequently (or there is a substantial likelihood that it occurs frequently) at levels of public health concern; and (3) there is a meaningful opportunity for health risk reduction for people served by public water systems.

EPA included PFOA and PFOS among the list of contaminants that water systems are required to monitor under the third Unregulated Contaminant Monitoring Rule (UCMR 3) in 2012. Results of this monitoring effort are updated regularly and can be found on the publicly-available National Contaminant Occurrence Database (NCOD) (<https://www.epa.gov/dwucmr/occurrence-data-unregulated-contaminant-monitoring-rule#3>). In accordance with SDWA, EPA will consider the occurrence data from UCMR 3, along with the peer reviewed health effects assessments supporting the PFOA and PFOS Health Advisories, to make a regulatory determination on whether to initiate the process to develop a national primary drinking water regulation.

In addition, EPA plans to begin a separate effort to determine the range of PFAS for which an Integrated Risk Information System (IRIS) assessment is needed. The IRIS Program identifies and characterizes the health hazards of chemicals found in the environment. IRIS assessments inform the first two steps of the risk assessment process: hazard identification, and dose-response. As indicated in the 2015 IRIS Multi-Year Agenda, the IRIS Program will be working with other EPA offices to determine the range of PFAS compounds and the scope of assessment required to best meet Agency needs. More about this effort can be found at <https://www.epa.gov/iris/iris-agenda>.

Non-Drinking Water Exposure to PFOA and PFOS

These health advisories only apply to exposure scenarios involving drinking water. They are not appropriate for use, in identifying risk levels for ingestion of food sources, including: fish, meat produced from livestock that consumes contaminated water, or crops irrigated with contaminated water.

The health advisories are based on exposure from drinking water ingestion, not from skin contact or breathing. The advisory values are calculated based on drinking water consumption and household use of drinking water during food preparation (e.g., cooking or to prepare coffee, tea or soup). To develop the advisories, EPA considered non-drinking water sources of exposure to PFOA and PFOS, including: air, food, dust, and consumer products. In January 2016 the Food and Drug Administration amended its regulations to no longer allow PFOA and PFOS to be added in food packaging, which will likely decrease one source of non-drinking water exposure.

Where Can I Learn More?

- EPA's Drinking Water Health Advisories for PFOA and PFOS can be found at: <https://www.epa.gov/ground-water-and-drinking-water/drinking-water-health-advisories-pfoa-and-pfos>
- PFOA and PFOS data collected under EPA's Unregulated Contaminant Monitoring Rule are available: <https://www.epa.gov/dwucmr/occurrence-data-unregulated-contaminant-monitoring-rule>
- EPA's stewardship program for PFAS related to TSCA: <https://www.epa.gov/assessing-and-managing-chemicals-under-tsca/and-polyfluoroalkyl-substances-pfas-under-tsca>
- EPA's research activities on PFASs can be found at: <http://www.epa.gov/chemical-research/perfluorinated-chemical-pfc-research>
- The Agency for Toxic Substances and Disease Registry's Perfluorinated Chemicals and Your Health webpage at: <http://www.atsdr.cdc.gov/PFC/>

