



Article 17

Nagog Pond Improvements & PFAS Mitigation

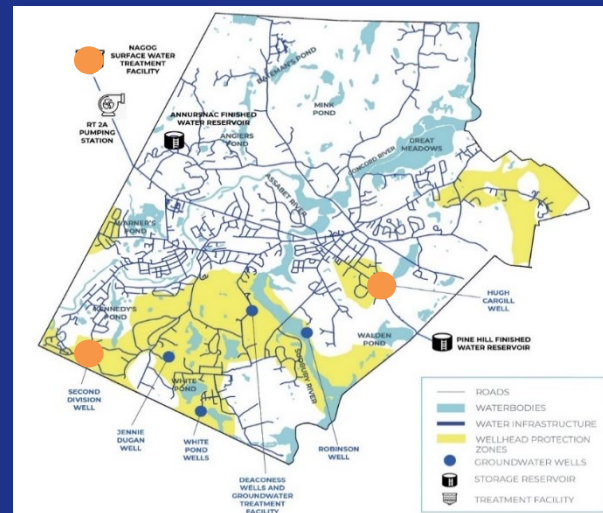
Mr. Weber moves that the Town take Affirmative action on Article 17 by:

Appropriating the sum of \$50,000,000, or any other sum, for the construction of water supply and water treatment facilities and improvements associated with the Nagog Pond water treatment plant, associated water main/intake improvements, and PFAS mitigation at impacted water supplies, including engineering, regulatory and other related services and costs necessary for said facilities and improvements; and that to meet this appropriation the Treasurer with approval of the Select Board be authorized to borrow the sum of \$50,000,000 under the provisions of Mass. Gen. Laws c. 44, § 8, to be expended, under the direction of the Town Manager, or take any other action relative thereto.



Article 17: The Issue

- Water Must Be Safe to Drink
- Supply Must Meet Demand
- Treatment Requirements (min. plan)
 - Nagog Pond – 20 years in making
 - (Surface Water Filtration/PFAS)
 - Hugh Cargill Wellfield (PFAS)
 - Second Division Well (PFAS)





Article 17

Financial Impacts

- No Impact on Property Tax
- Funded Through User Fees (Water Rates)
 - Enterprise System
- Borrowing Request Required;
 - To be Eligible for State and Federal Funding (low interest)
 - To Meet New Drinking Water Quality Timelines
- Borrowing to Drawn in Accordance to Spending Plan



Article 17

Alternatives to Centralized Treatment

- Do Nothing
 - Continued Public Health Risk
 - Inability to meet season demands
 - Fines – SDWA Noncompliance
- Bottled Water (Temporary)
 - Very Expensive and Complex
 - Inability to meet season demands
- Home Treatment (Point-of-Use)
 - Similar If Not Higher Capital Cost
 - Higher Operating Cost
 - Quality Control Challenges





Article 17

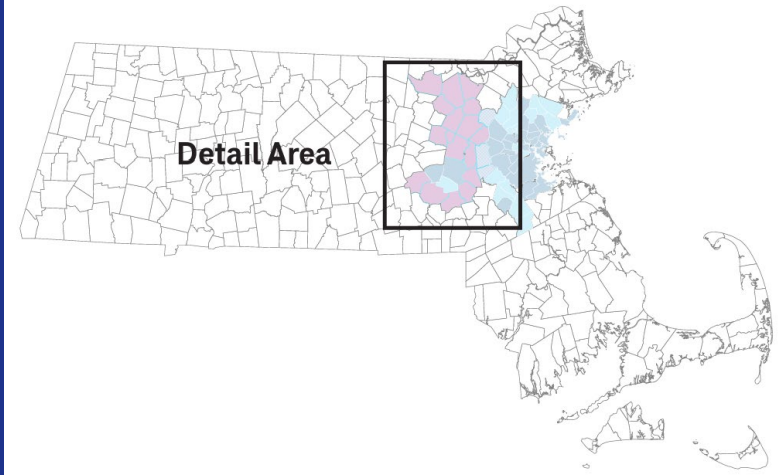
MWRA Water System Expansion Evaluation to MetroWest Communities

FINAL REPORT

JULY 2023

MWRA Water System Expansion Evaluation to MetroWest Communities

**Massachusetts Water
Resources Authority**





Article 17

Spending Plan for this Borrowing Request

**2016 Town Meeting
Authorization \$16.5 million**

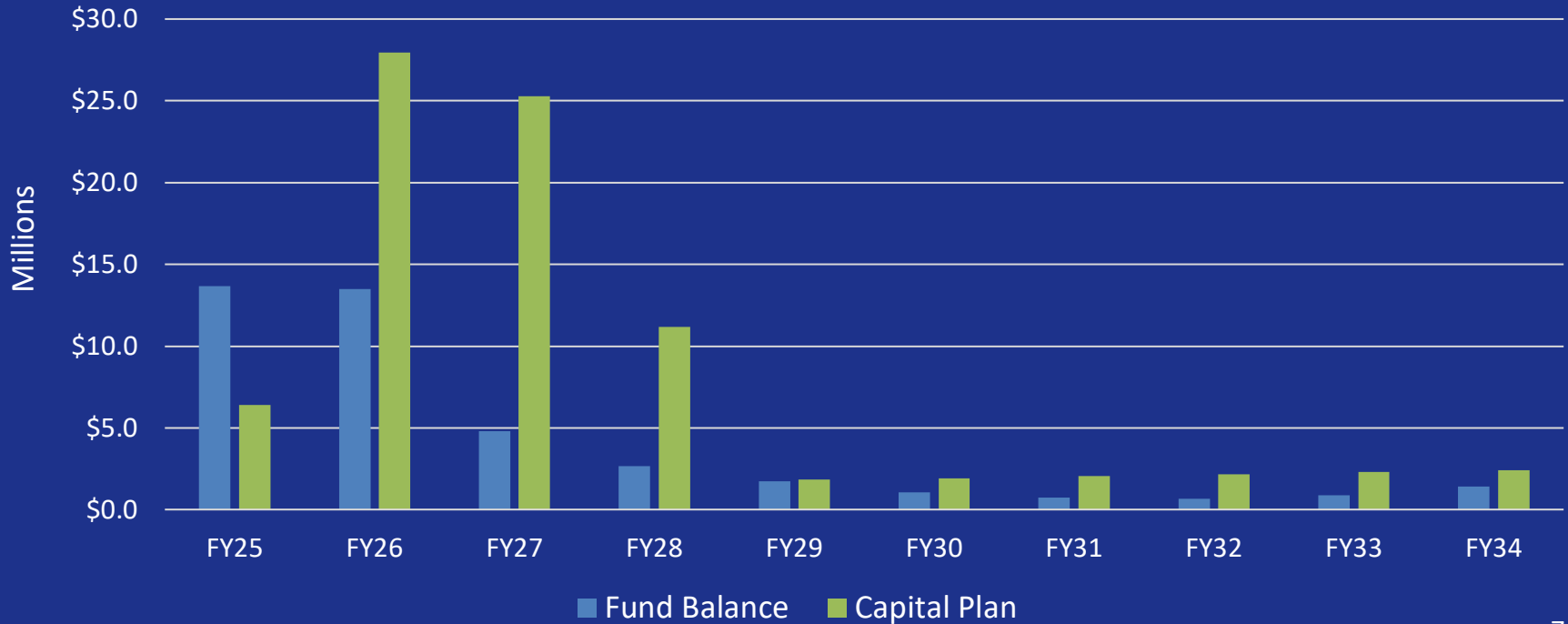
**New Request
\$50 million**

Work Item	Spent to Date in Millions	Anticipated Spending in Millions	Anticipated Spending in Millions
Nagog Intake Phase I	\$3.0	\$0.8	\$0.0
Nagog Intake Phase II	\$0.0	\$3.6	\$0.0
Nagog Filtration Plant	\$0.0	\$9.1	\$28.0
PFAS Treatment for Two Wells	\$0.0	\$0.0	\$20.0
Rt 2A Water Main Work	\$0.0	\$0.0	\$2.0
Totals	\$3.0	\$13.5	\$50.0



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10 Year Water Capital Plan





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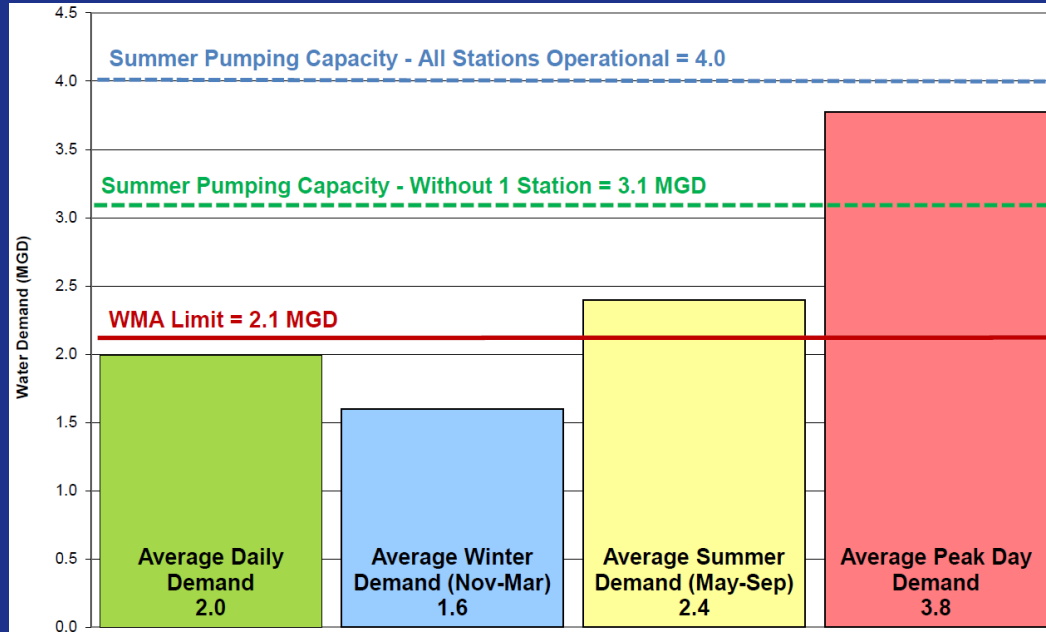
PFAS

PFAS6 Monitoring Results - Most Recent		
<i>Date</i>	<i>Sampling Location</i>	<i>Result (ppt)</i>
4/4/2023	Jennie Dugan Well ¹	2.71
2/8/2024	Robinson Well	3.20
2/8/2024	Deaconess Treatment Facility	2.50
4/4/2023	Hugh Cargill Wellfield ¹	9.35
4/4/2023	Second Division Well ¹	5.27
7/18/2022	Nagog Pond ²	8.87
¹ Next sampling scheduled for Spring 2024		
² Next sampling scheduled for Summer 2024		



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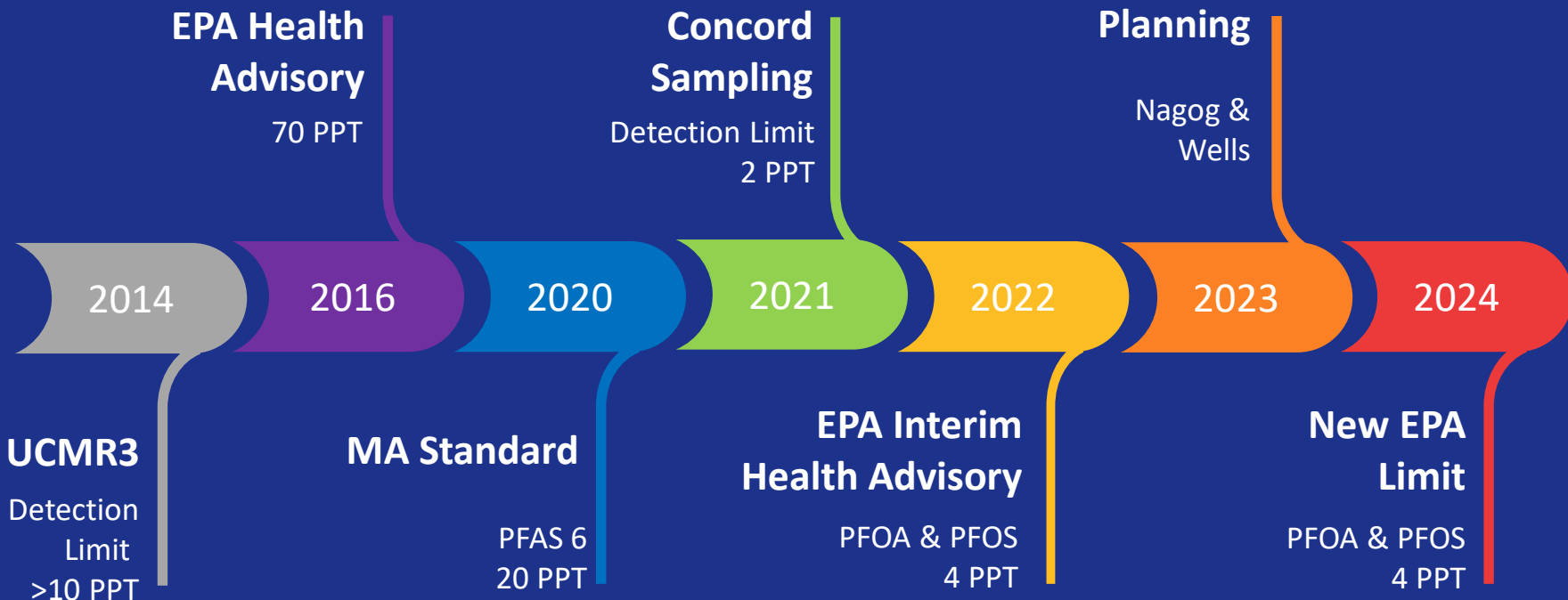
Water System Capacity vs. Demand





Article 17

Nagog Pond Improvements & PFAS Mitigation





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Spending Plan for this Borrowing Request

2016 Town Meeting Authorization \$16.5 mil.

New Authorization Request \$50 mil.

Work Item
Nagog Intake Replacement
Nagog Filtration Plant
PFAS Treatment for Two Wells
Rt. 2A Water Main Work
Contingency
Totals by Fiscal Year

Spent thru FY23	Anticipated Spending FY24	Anticipated Spending FY25	Anticipated Spending FY26
\$2,909,726	\$1,400,000	\$3,000,000	\$0
\$0	\$600,000	\$500,000	\$8,090,274
\$0	\$0	\$0	\$0
\$0	\$0	\$0	\$0
\$0	\$0	\$0	\$0
\$2,909,726	\$2,000,000	\$3,500,000	\$8,090,274

Anticipated Spending FY25	Anticipated Spending FY26	Anticipated Spending FY27/FY28
\$0	\$0	\$0
\$45,000	\$15,909,000	\$12,000,000
\$0	\$500,000	\$19,500,000
\$0	\$1,000,000	\$1,000,000
\$5,000	\$1,000,000	\$1,041,000
\$50,000	\$17,409,000	\$32,541,000



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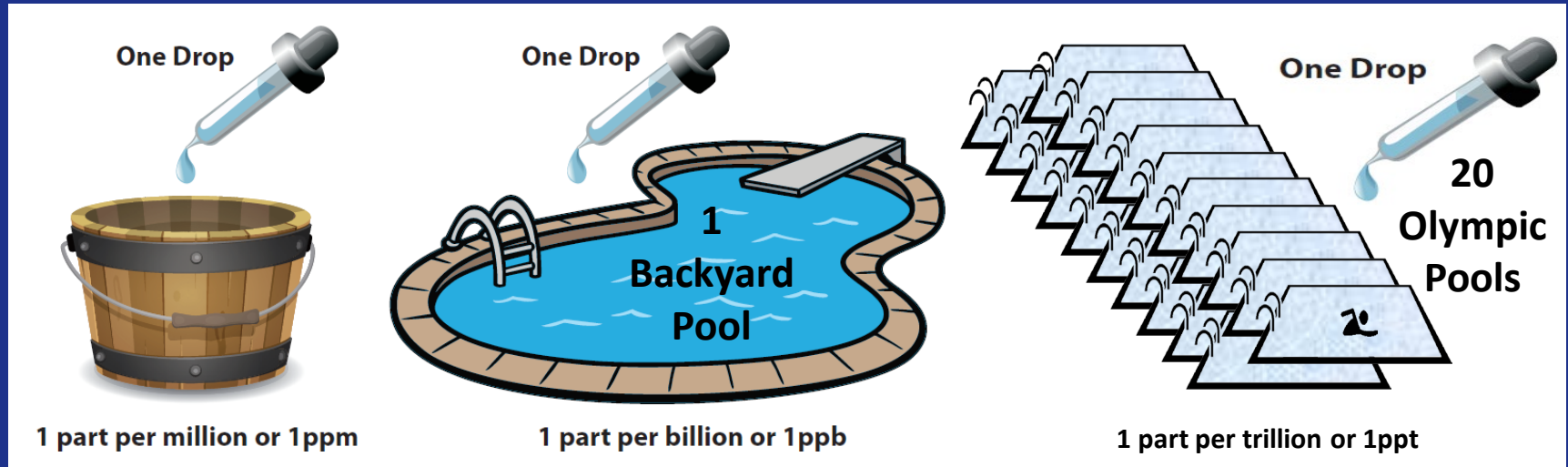


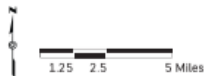
Figure 4-1: Conceptual Projects Overview
 MWRA Water System Expansion Evaluation to MetroWest Communities

CONCEPTUAL PROJECTS:

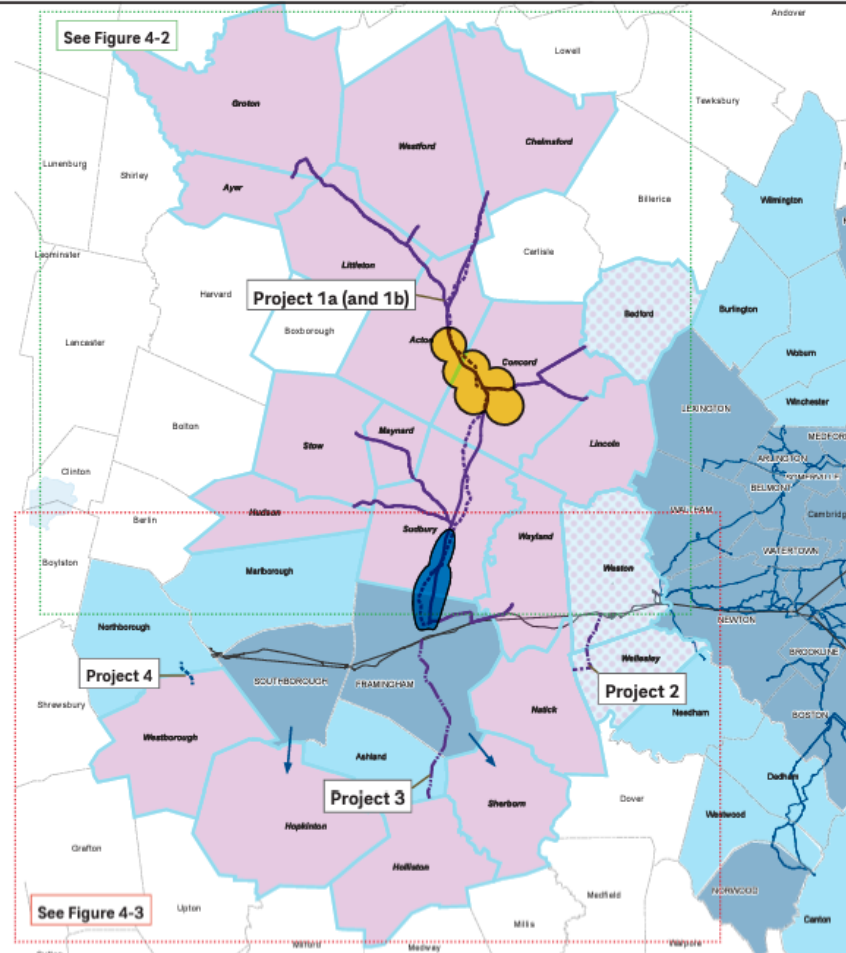
- Project 1a (and 1b) - Service to Communities North of the MetroWest Water Tunnel
- Project 2 - Service to Weston, Wellesley, and Natick
- Project 3 - Service to Holliston
- Project 4 - Service to Westborough
- Project 5 - Wheeling to Hopkinton and Sherborn

LEGEND

- Study Community
- Study Community (MWRA served)
- MWRA Member Community
- MWRA Partially Served Community
- Expanded MWRA Service Area
- Existing MWRA Distribution System
- Existing MWRA Transmission System
- Proposed Pipe Route (Project 1a)
- Proposed Pipe Route (Project 1b)
- Proposed Pipe Route (Project 2)
- Proposed Pipe Route (Project 3)
- Existing Pipe Route (Project 4)
- Represents Wheeling (Project 5)
- Assumed Transmission Main Pumping Station (Location TBD)
- Assumed MWRA Storage (Location TBD)



Source: MWRA, CDM Smith, Open Streetmap



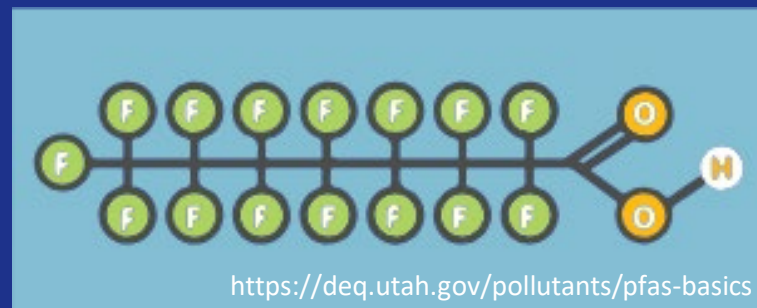


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US EPA



US EPA



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Nagog Pond Improvements & PFAS Mitigation

What are the health effects of PFAS?



Increases in cholesterol levels (PFOA, PFOS, PFNA, PFDA)



Changes in liver enzymes (PFOA, PFOS, PFHxS)



Small decreases in birth weight (PFOA, PFOS)



Lower antibody response to some vaccines (PFOA, PFOS, PFHxS, PFDA)



Pregnancy-induced hypertension and preeclampsia (PFOA, PFOS)



Kidney and testicular cancer (PFOA)

