A Brief History of PFAS Regulation in Massachusetts

John Beling, Deputy Commissioner for Policy and Planning,
MassDEP

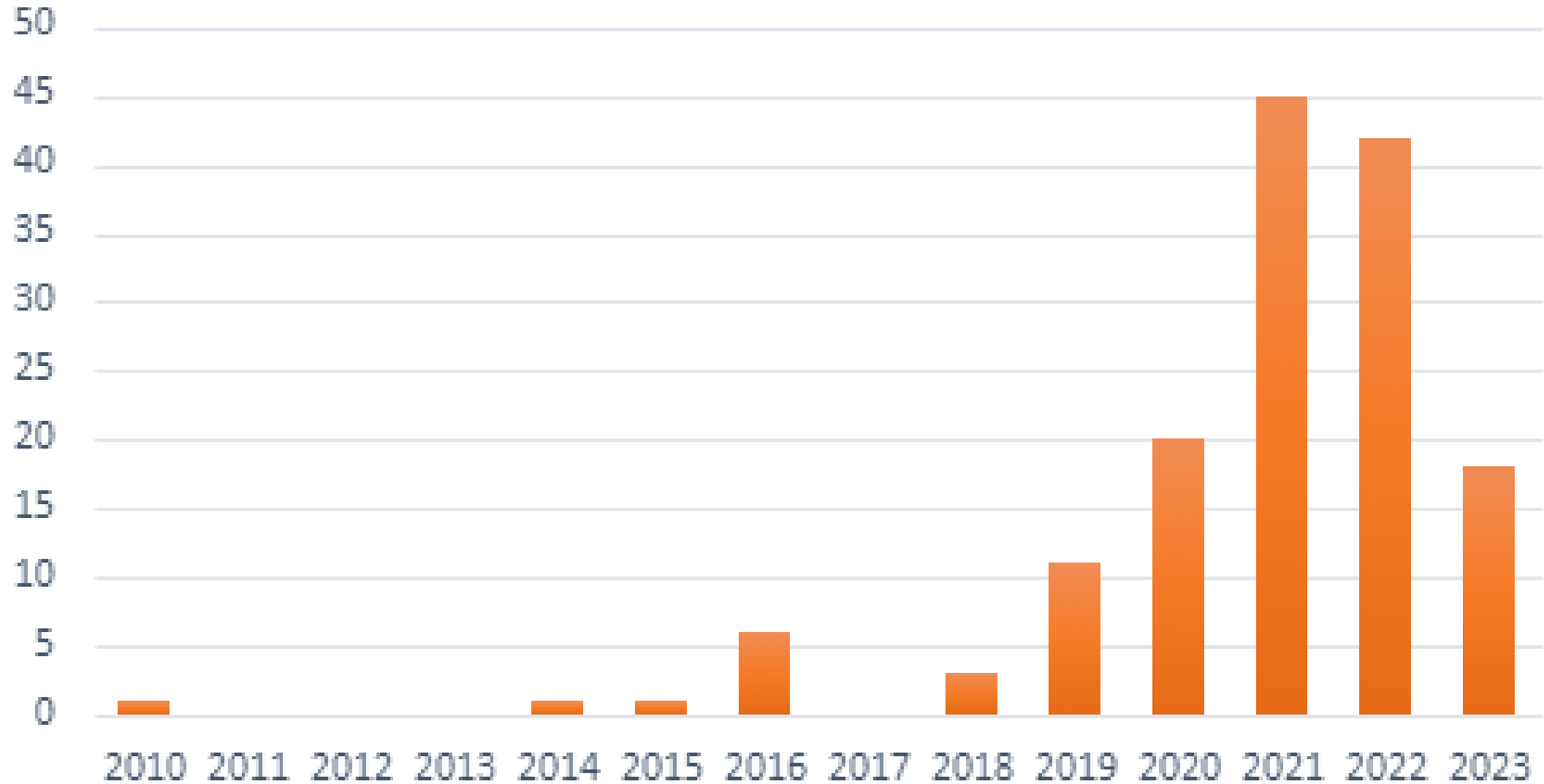# MCP PFAS Notification — Groundwater Reportable Concentrations (RCs)

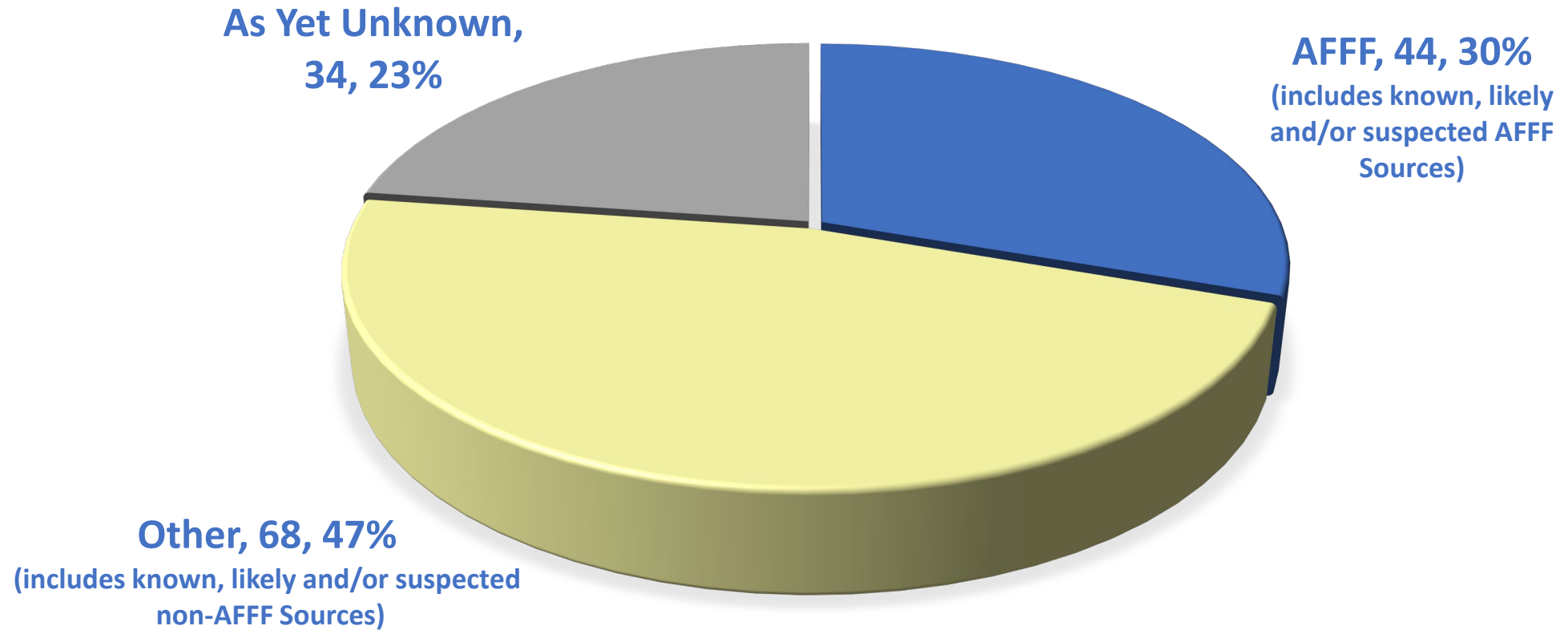|	RCGW-1	RCGW-2 mg/l
PERFLUORODECANOIC ACID (PFDA)	*	40
PERFLUOROHEPTANOIC ACID (PFHpA)	*	40
PERFLUOROHEXANESULFONIC ACID (PFHxS)	*	0.5
PERFLUORONONANOIC ACID (PFNA)	*	40
PERFLUOROOCTANESULFONIC ACID (PFOS)	*	0.5
PERFLUOROOCTANOIC ACID (PFOA)	*	40
* Sum of PFAS6	20 ng/l	

- RCGW-2: all other areas, PFAS-specific

MCP Notification – Soil Reportable Concentrations

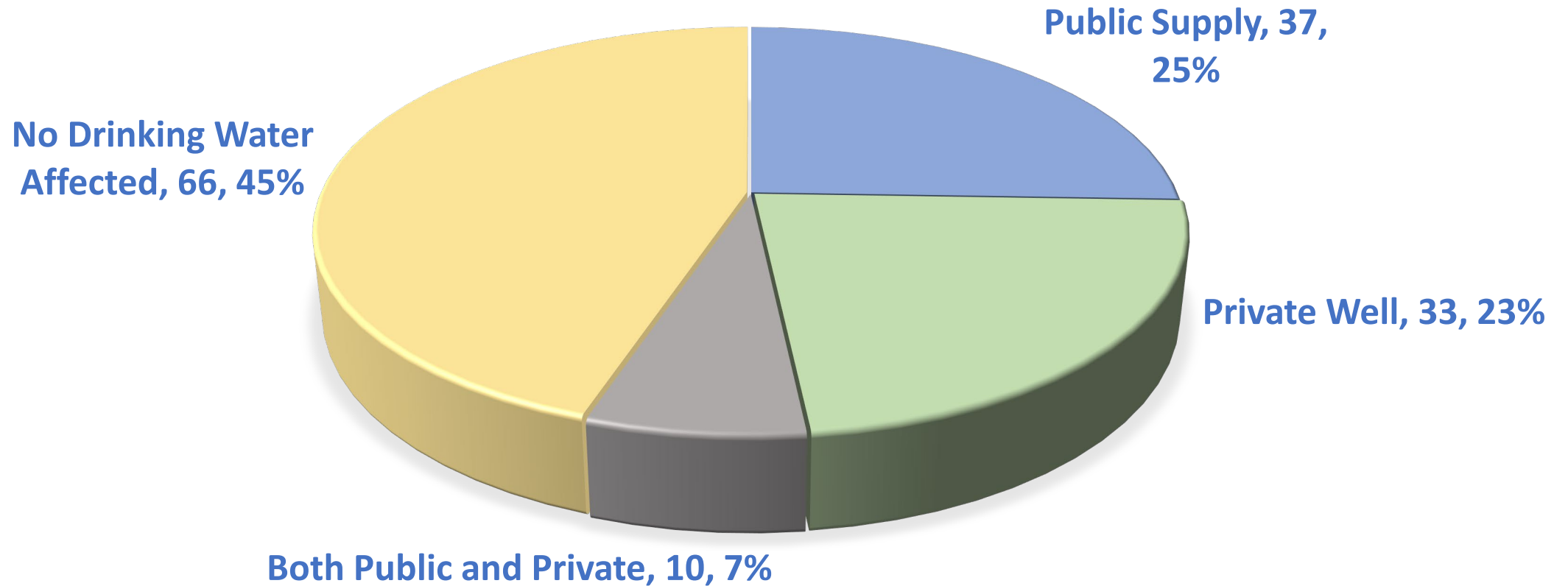|	RCS-1 mg/kg	RCS-2 mg/kg
PERFLUORODECANOIC ACID (PFDA)	3E-04 (300 ng/kg)	0.4
PERFLUOROHEPTANOIC ACID (PFHpA)	5E-04 (500 ng/kg)	0.4
PERFLUOROHEXANESULFONIC ACID (PFHxS)	3E-04 (300 ng/kg)	0.4
PERFLUORONONANOIC ACID (PFNA)	3.2E-04 (320 ng/kg)	0.4
PERFLUOROOCTANESULFONIC ACID (PFOS)	2E-03 (2,000 ng/kg)	0.4
PERFLUOROOCTANOIC ACID (PFOA)	7.2E-04 (720 ng/kg)	0.4

PFAS Notifications by Year

Source of PFAS Sites

As Yet Unknown, 34, 23%

AFFF, 44, 30%
(includes known, likely and/or suspected AFFF Sources)

Other, 68, 47%
(includes known, likely and/or suspected non-AFFF Sources)

PFAS RTNs and Drinking Water

Public Supply, 37, 25%

Private Well, 33, 23%

Both Public and Private, 10, 7%

No Drinking Water Affected, 66, 45%

MassDEP's PFAS6 Maximum Contaminant Levels:

20 nanograms per liter (ng/L), or parts per trillion (ppt) applicable to community (COM) and non-transient non-community (NTNC) systems for the sum of the concentrations of these six PFAS compounds:
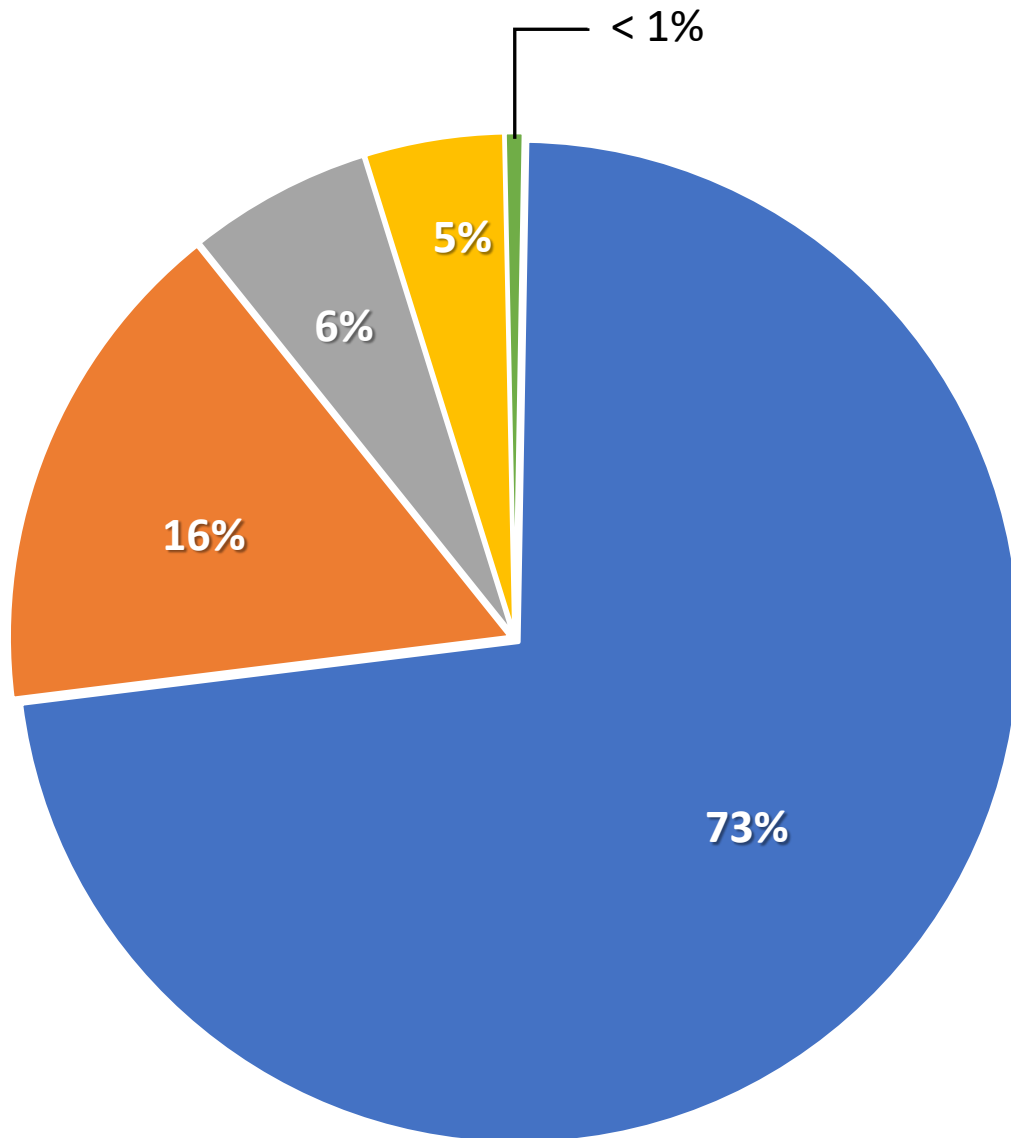
PFOS

PFOA

PFHxS

PFNA

PFHpA

PFDA

Private Water Supply Testing

- 1,668 private wells sampled
  - 85 communities with > 60% residents using private wells
- Program ended June 2022
- 95% below the 20 ng/l PFAS6 MCL
- 73% reported as ND; RL 2 ng/l PFAS6
- Approximately 200,000 private wells in MA

https://www.mass.gov/info-details/pfas-in-private-well-drinking-water-supplies-faq#pfas-testing-in-private-wells-

Legend: ■ ND ■ ND to 10 ng/l ■ 10 - 20 ng/l ■ 20 - 90 ng/l ■ > 90 ng/l

EPA Proposed PFAS MCLGs and MCLs

PFAS	MCLG	MCL
PFOA	0	4.0 ppt
PFOS	0	4.0 ppt
PFBS		
PFNA	1.0 (unitless) Hazard Index	1.0 (unitless) Hazard Index
GenX (HFPO-DA)		
PFHxS		

How do the proposed MCLs relate to MassDEP's PFAS6 MCL?

- MassDEP has tested all PWS for all six of the PFAS compounds included in the EPA draft MCLs

- MassDEP PFAS6 MCL = 20 ppt for the sum of six PFAS

- 2 PFAS are in MassDEP PFAS6 MCL and not in EPA's proposed regs: PFHpA and PFDA

- 2 PFAS are in EPA proposed regs and not in MassDEP PFAS6 MCL: Gen-X (HFPO-DA) and PFBS

- Compliance with PFAS6 MCL currently based on a quarterly average

Approximate COM and NTNC PWS Impacted by the EPA MCLs

	Number of COM and NTNC PWS required to test for PFAS impacted by draft EPA MCL *	% of total COM and NTNC PWS required to test for PFAS impacted by draft EPA MCL
PWS currently over Mass PFAS6 MCL and working with MassDEP to reduce levels	49	7%
PWS newly impacted by draft EPA MCL	149	22%
Total PWS impacted by draft EPA MCL	198	29%

*Includes both PFOA, PFOS and HI impacted systems.

PFAS & Residuals

Terminology: Residuals are treated sludges

Sludge

WWTP sludge

Treatment →

Residuals

Biosolids
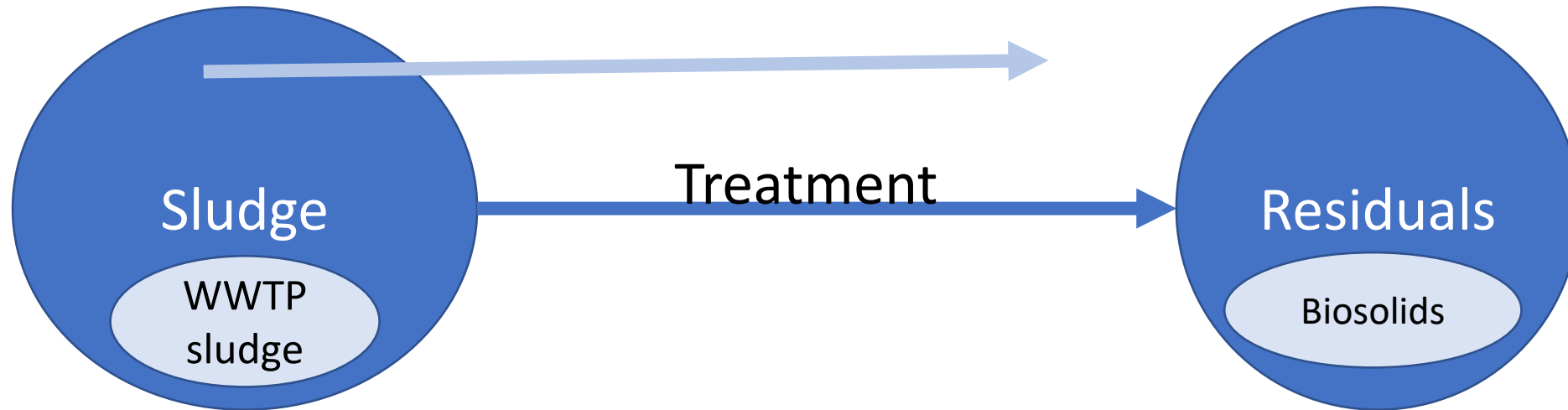
310 CMR 32.00 is intended to allow the land application of sludge and septage for beneficial purposes in a manner that will protect public health and the environment...
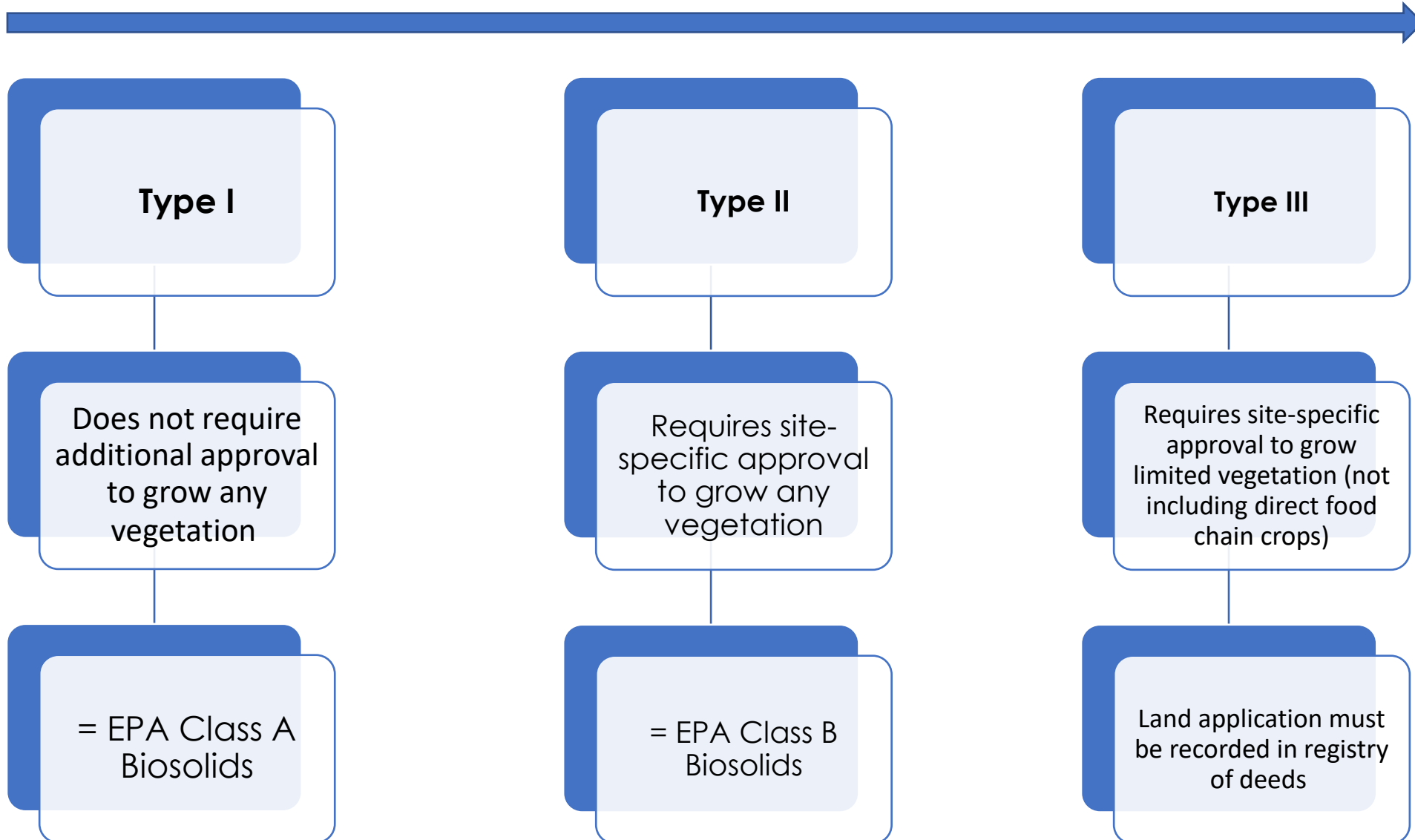
Can be from:

- ✓ Wastewater Treatment Plants (WWTP)
- ✓ Drinking water treatment (WTP) sludge
- ✓ Processing of paper (i.e. short paper fiber, SPF)
- ✓ Industrial processing (manufacturing of gelatin and cotton; cultivation and processing of cranberries)

Caveats:
- ➢ Does <u>not</u> include: grit, screening, or grease
- ➢ Must meet pathogen standards
- ➢ Board of Health approval required unless product from out of state
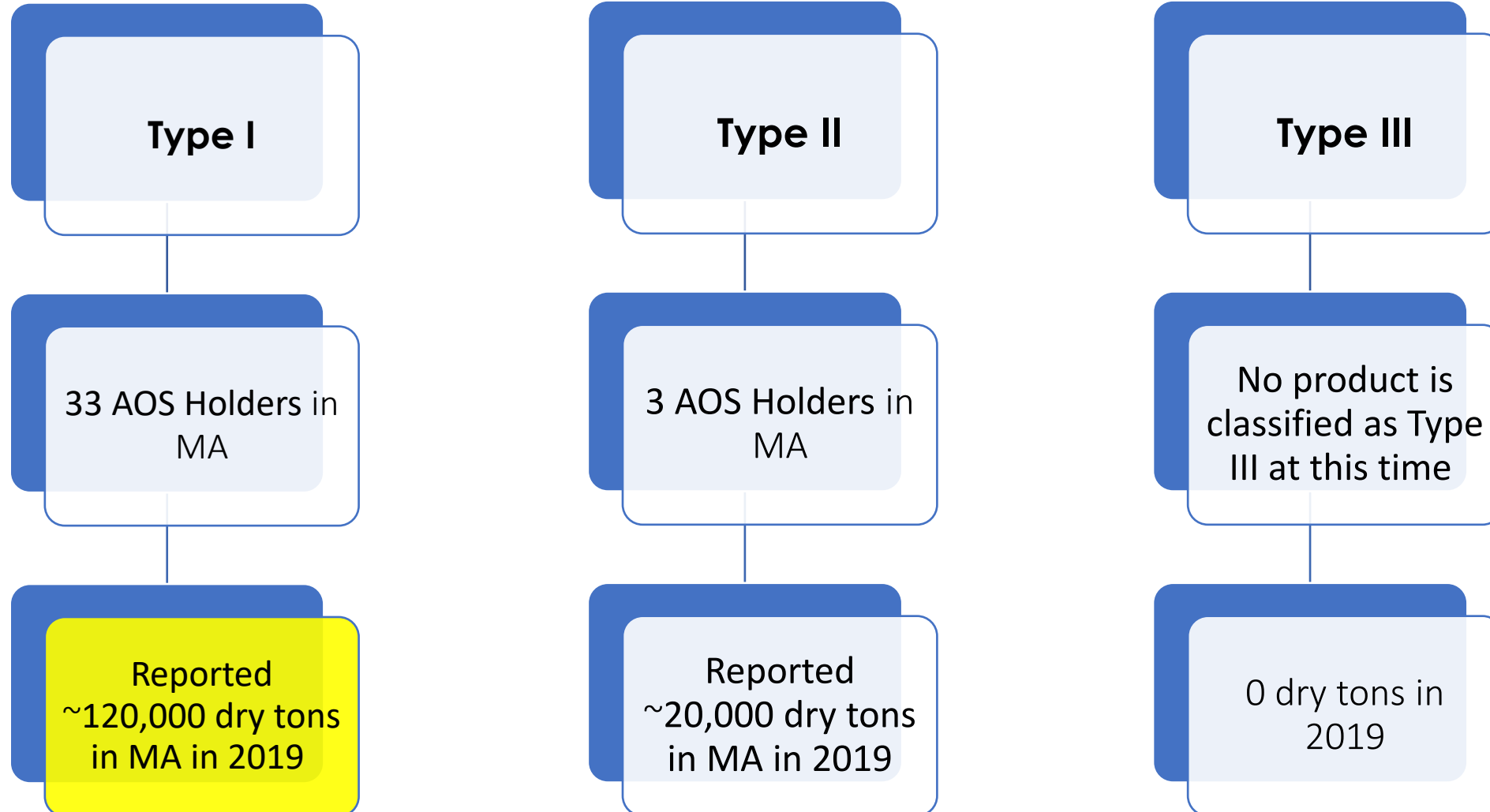- ➢ Used, sold, or distributed for reuse

What can you do with residuals?

more stringent limits (pathogen and metals)   less stringent limits

Type I	**Type II**	**Type III**
Does not require additional approval to grow any vegetation	Requires site-specific approval to grow any vegetation	Requires site-specific approval to grow limited vegetation (not including direct food chain crops)
= EPA Class A Biosolids	= EPA Class B Biosolids	Land application must be recorded in registry of deeds

MA residuals landscape

Type I

33 AOS Holders in MA

Reported ~120,000 dry tons in MA in 2019

Type II

3 AOS Holders in MA

Reported ~20,000 dry tons in MA in 2019

Type III

No product is classified as Type III at this time

0 dry tons in 2019

NEIWPCC
Sludge Draft Report
('18/'19)

Other 1%

Landfill 18%

Beneficial Reuse 38%

Incineration 43%

DRAFT Report:
2018 disposal methods for *MA-produced* sludge
Dry tons

Concerns:
- Groundwater contamination from land applied biosolids
- Few landfills & decreasing landfill capacity
- Few incinerators, many approaching end of useful life, air emissions, etc...