Valley Water

Clean Water • Healthy Environment • Flood Protection

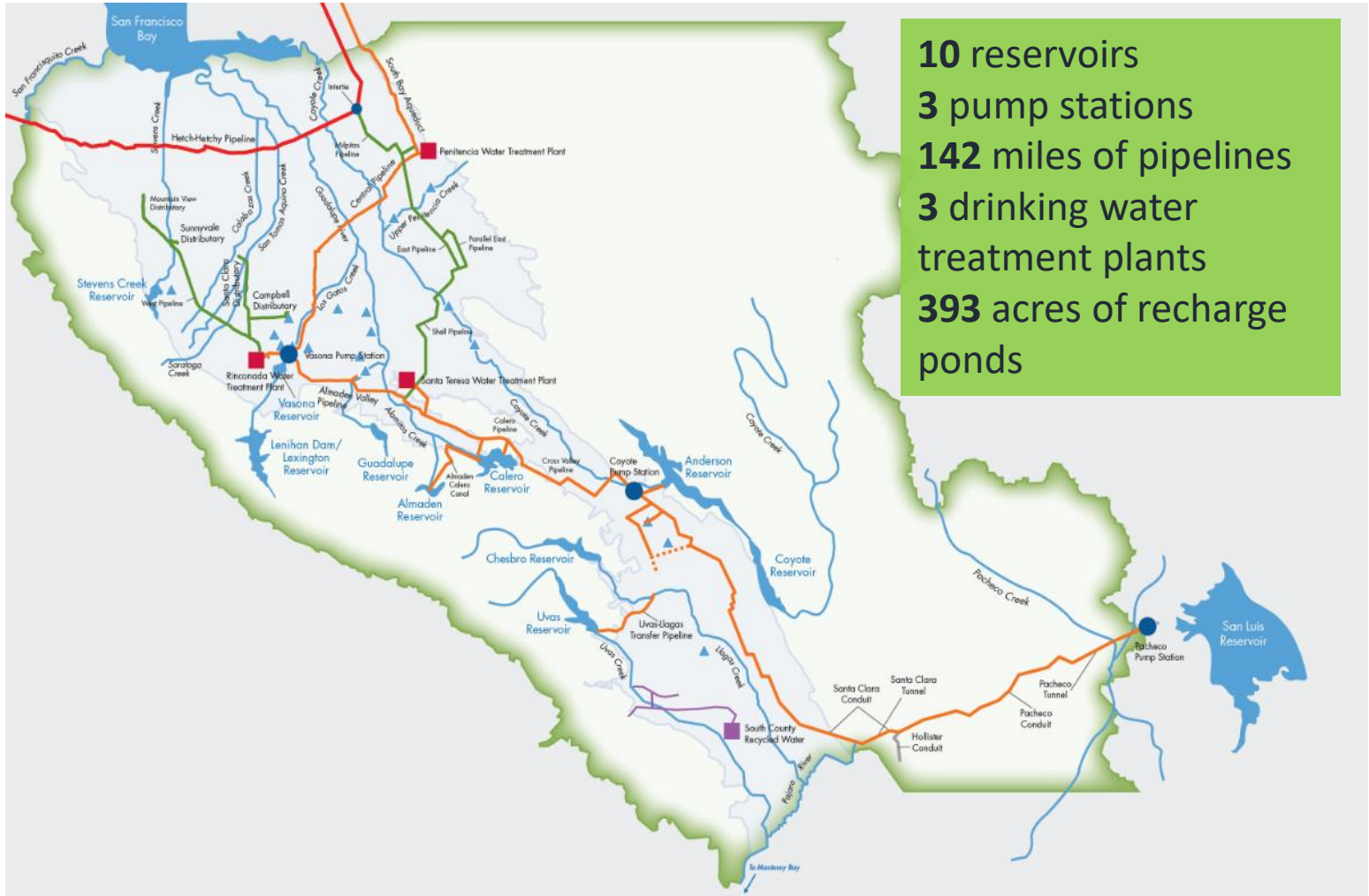
PFAS Update

BACWA Recycled Water Committee Meeting
Sept 20, 2022

Agenda

- Introduction to Valley Water
- PFAS Background
- Overview of Valley Water's PFAS Response

Valley Water Overview



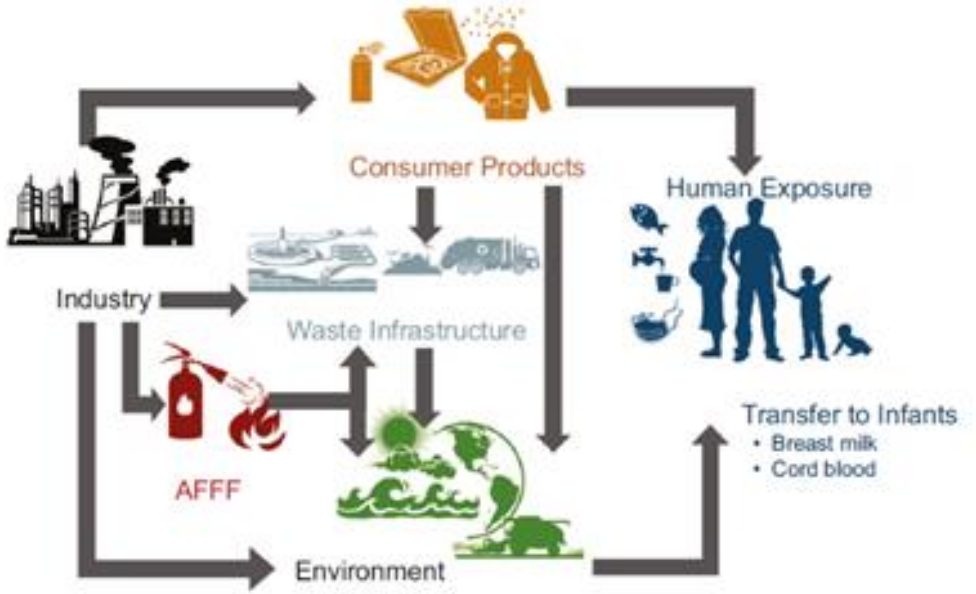
10 reservoirs
3 pump stations
142 miles of pipelines
3 drinking water treatment plants
393 acres of recharge ponds

- Groundwater Sustainability Agency
  - Protect and augment supplies to support beneficial use
  - Comply with SGMA
- Treated water wholesaler
  - Deliver high-quality drinking water to 8 water retailers
- Recycled/Purified Water
  - Support expanded use while protecting groundwater quality

Valley Water

Background on PFAS

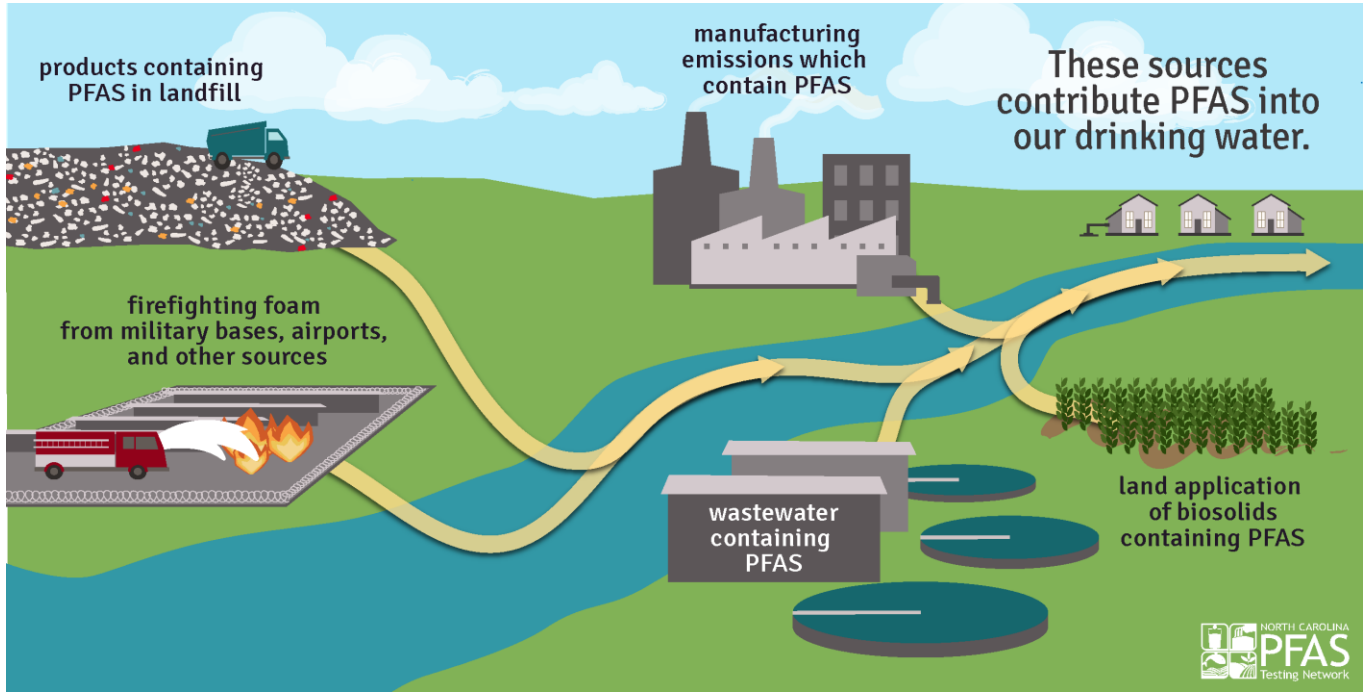
- Large group of man-made chemicals that includes PFOA, PFOS, Gen X, and others
- Multiple potential exposure pathways including drinking water
- Major environmental sources
  - fire training/fire response sites,
  - industrial sites,
  - landfills, and
  - wastewater treatment plants/biosolids
- Potential adverse health effects include reproductive/developmental harm, immune system suppression, and cancer



Potential major exposure pathways of PFAS to humans.
Figure from Sunderland et. al. (2019)

How do PFAS get into drinking water?

- Major environmental sources
  - fire training/fire response sites,
  - industrial sites,
  - landfills, and
  - wastewater treatment plants/biosolids
- PFAS accumulate in groundwater and are persistent in the environment



Federal PFAS drinking water regulations

- EPA's health advisory levels (HALs) are non-enforceable and non-regulatory
- HALs provide information on contaminants present in drinking water that can cause human health effects
  - protective of noncancer effects over a lifetime of exposure
  - including sensitive populations and life stages
  - Only 20% of exposure attributed to drinking water
- Federal MCLs for PFOS/PFOA are expected Fall 2022.

EPA Health Advisory Levels Issued June 15, 2022

Chemical	Health Advisory Levels (ppt)	Minimum Reporting Level (ppt)
PFOA	0.004 (interim)	**4**
PFOS	0.02 (interim)	**4**
GenX	10 (final)	5
PFBS	2,000 (final)	3

Notes:

- ppt: parts per trillion
- Red font indicates HAL below current lab method detection capability.

State PFAS drinking water regulations

- Health-based advisory levels for PFOA, PFOS and PFBS (proposed for PFHxS)
  - Notification levels: if exceeded, water providers must notify their governing bodies, and the State Board recommends they inform customers
  - Response levels: if exceeded, water providers must take the source out of service, provide treatment, or notify customers
- State MCLs for some PFAS are expected late 2022/early 2023.

State Board Notification and Response Levels

Chemical	Notification Level (ppt)	Response Level (ppt)	CCRDL (ppt)
PFOA	5.1	10	4 (QRAA)
PFOS	6.5	40	4 (QRAA)
PFBS	500	5,000	4 (QRAA)
PFHxS	2 (draft)	20 (draft)	4 (single)

Notes:

- ppt: parts per trillion
- CCRDL: Consumer Confidence Report Detection Levels
- QRAA: Compliance based on quarterly running annual average
- Single: Compliance based on single sampling result
- Notice of proposed PFHxS notification and response levels issued on July 2, 2022

VALLEY WATER'S PFAS RESPONSE ELEMENTS

MONITORING

ANALYTICAL CAPABILITY

RESEARCH AND DATA ANALYSIS

RETAILER ENGAGEMENT

REGULATORY COORDINATION

OUTREACH AND RESPONSE

Valley Water

What we know about PFAS levels in local sources

- PFOA, PFOS, GenX, PFHxS, and PFBS have not been detected in Valley Water's imported water or the treated water we supply to our retailers
- Valley Water monitoring well testing shows that PFOA, PFOS, and PFBS not widely present above notification levels but detected in some wells; PFHxS detections more common (GenX was not detected)
- Several local retailers tested water supply wells; most have no PFAS detections
- PFOS above notification level in some San Jose Water Company wells
  - Wells taken out of service out of abundance of caution and customers notified
- No water supply wells have had PFAS detections above the State Board response level

Ongoing Work

- Coordinate with water retailers and regulators
- Understand PFAS occurrence and potential sources
- Monitor and report results
- Track regulations and treatment technologies
- Be transparent with the public

NPDES Permits and PFAS

- Would EPA ultimately use NPDES to restrict PFAS discharges to water bodies?
  - Clean Water Act prohibits anybody from discharging pollutants into a water of the United States without a NPDES permit.
  - A permit may be required if you discharge into a storm sewer.
  - EPA might leverage NPDES permitting to reduce PFAS discharges to waterways.
  - EPA may propose monitoring requirements in wastewater and stormwater discharges, including source control and best management practices.

Biosolids and PFAS

- Would there be increased focus/analysis/monitoring of biosolids?
  - Biosolids will become more analyzed as EPA conducts risk assessment of PFAS in biosolids to be completed by 2024. This will determine if regulation in biosolids is appropriate.
- Will there be efforts to identify sources to POTWs and eventually a Pollutant Minimization Plan (PMP) as part of Source Control?
  - *PFAS Strategic Roadmap: EPA's Commitments to Action* lists restriction as a goal, by placing responsibility to limit exposures and address hazards on "manufacturers, processors, distributors, importers, industrial and other significant users, dischargers, and treatment and disposal facilities".

RO Concentrate and PFAS

- ROC disposal will present a challenge to meet the NPDES permit
- Would require further treatment to
  - Separate or destroy PFAS in concentrate
  - Degrade via defluorination
- Or consider other disposal methods

QUESTIONS