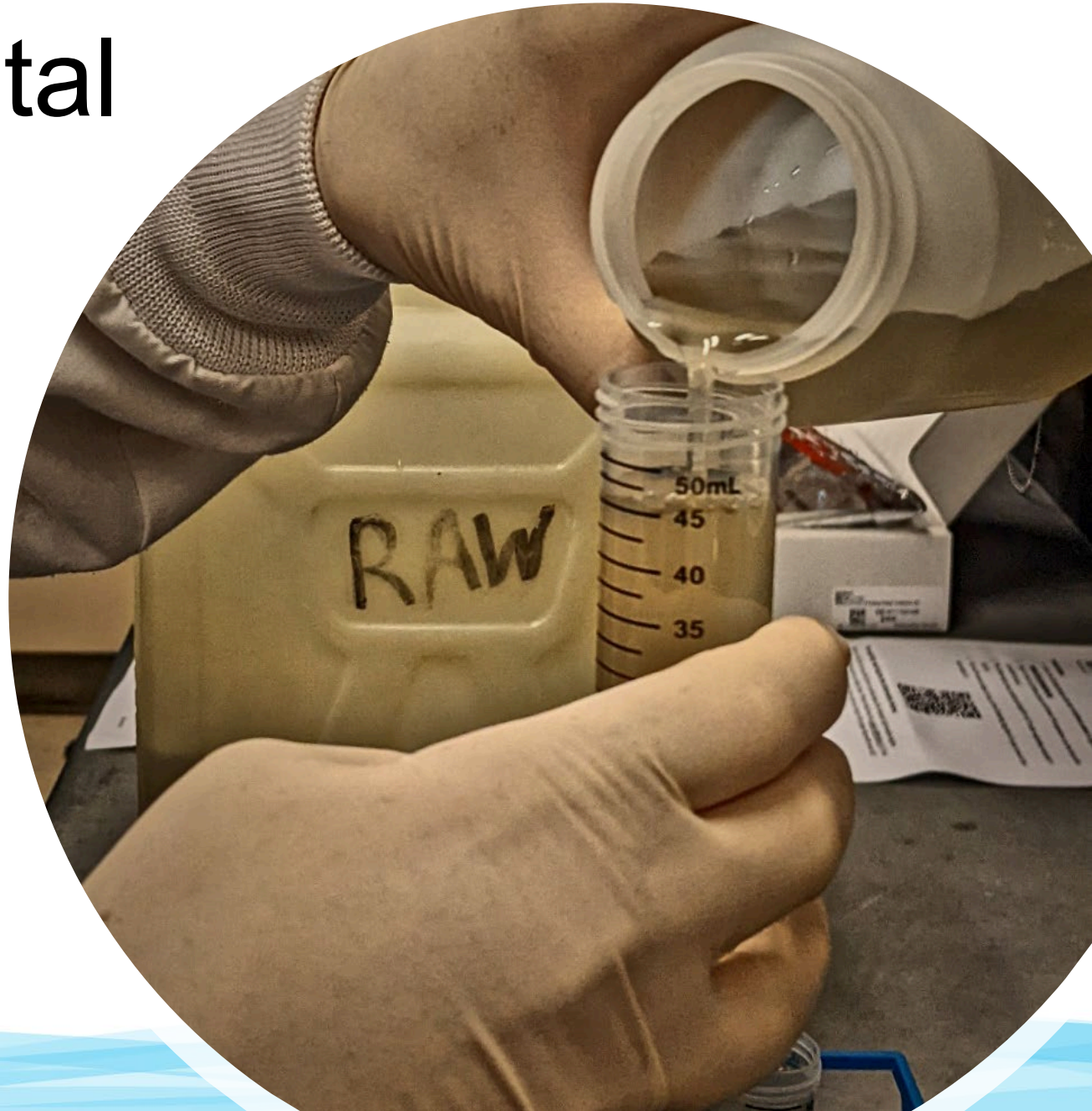
Laguna Environmental Laboratory Update

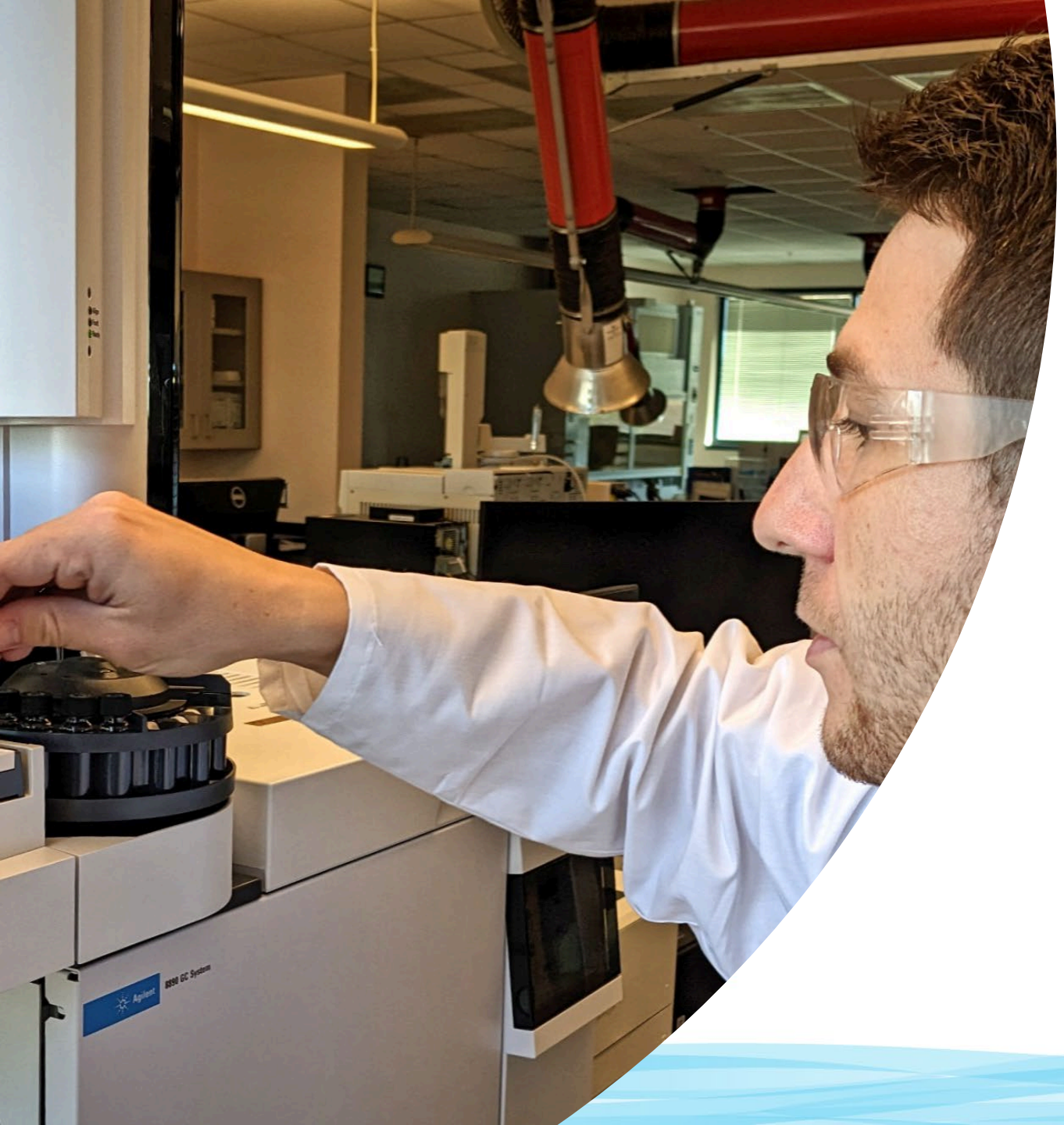


May 15, 2025
Board of Public Utilities

Robert C. Wilson, Laboratory Supervisor

Santa Rosa WATER

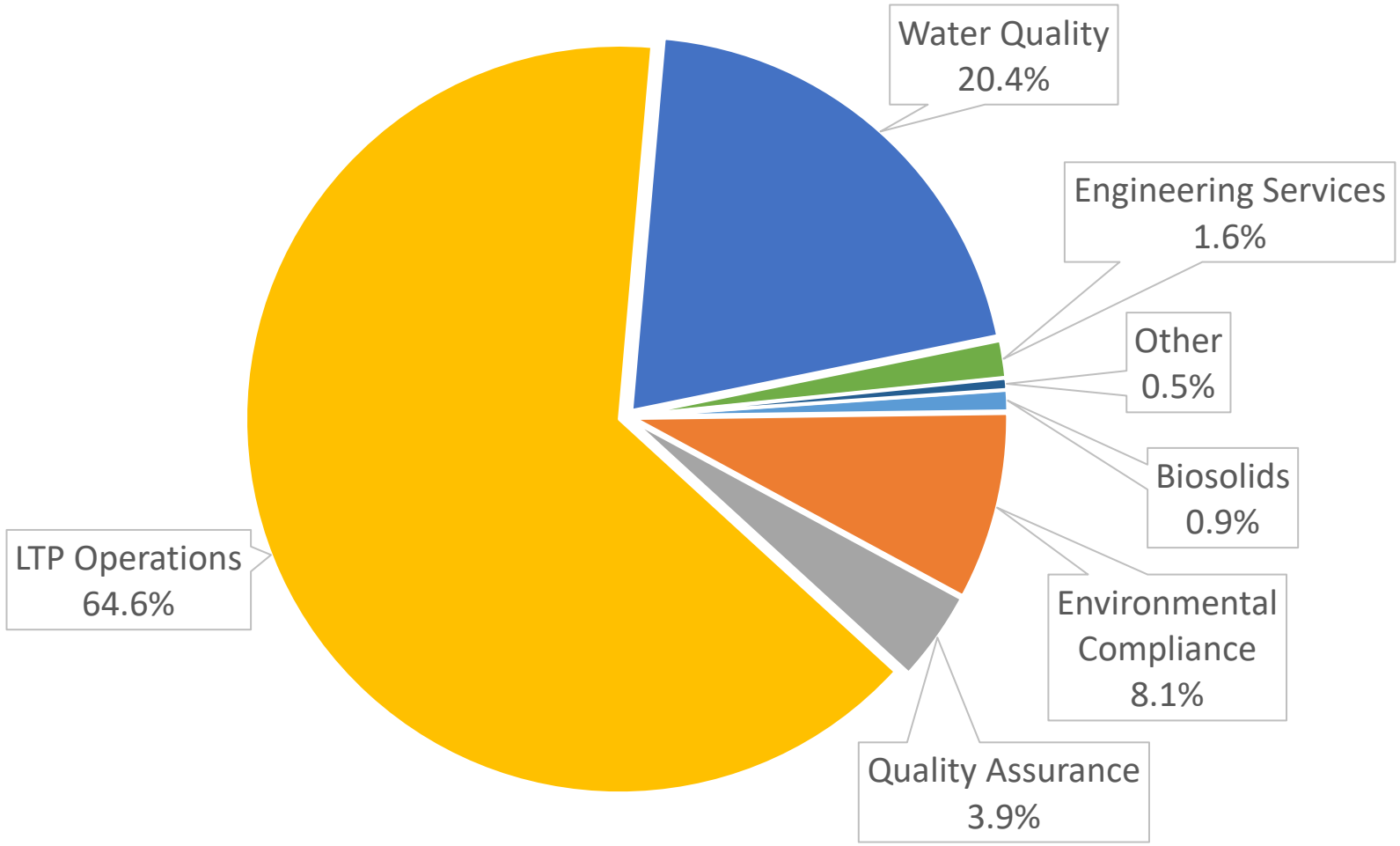
OUR FUTURE IN EVERY DROP



Laguna Environmental Laboratory (LEL)

- LEL was established in 1968 with primary function of physical and chemical measurements of wastewater
- Expansion to add a broader scope of analytical testing in 2000
- Staffing includes laboratory aides, laboratory analysts, a programmer, and management for a total of 14 people
- Staff processed 12k samples for a total of 33k analytes in 2024

Laguna Environmental Laboratory Clients



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Customer Service

- Analyze and upload data for drinking water, wastewater, and biosolids reporting
- Work with clients to provide sample assistance and bottle kits
- Support special sampling projects for analytes not covered under the Laguna Environmental Laboratory ELAP Scope
  - PFAS
  - Dioxin
  - Bacteriodes

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Maintaining Accreditation

- Environmental Laboratory Accreditation Program (ELAP)
  - Accreditation body for environmental laboratories in California
  - Adopted The NELAC Institute (TNI) standard with laboratories adopting changes by January 2024

Compliance with the TNI Standard

- Implemented a new Quality Management System
- Updated the Standard Operating Procedures throughout the Laguna Environmental Laboratory
- Increased the level of traceability of all laboratory support equipment, instrumentation, and reagents

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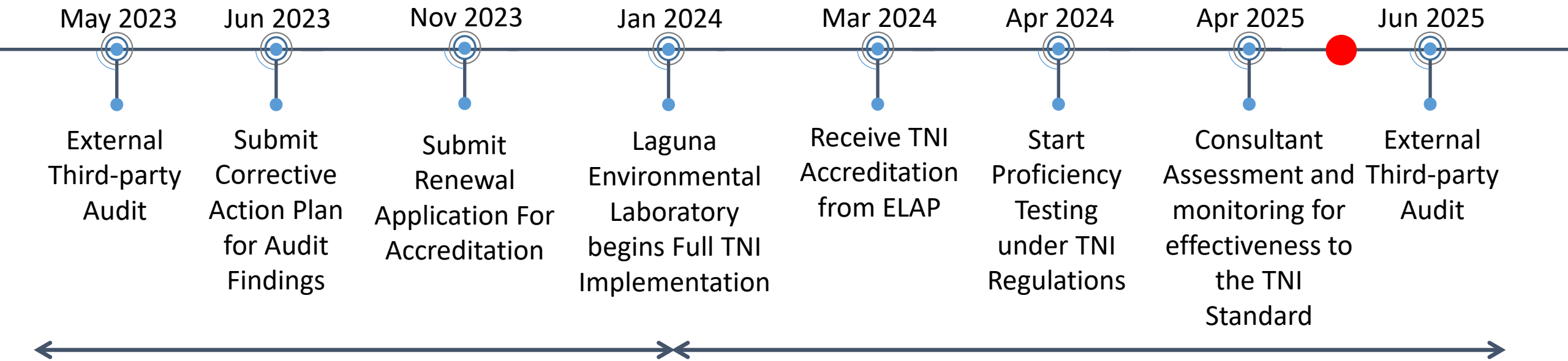
TNI Compliance Timeline



Finish updating Quality Assurance Manual, Standard Operating Procedure Documentation, Bench Sheets, ETC…

Ongoing Laboratory staff assessment for compliance with TNI Standard

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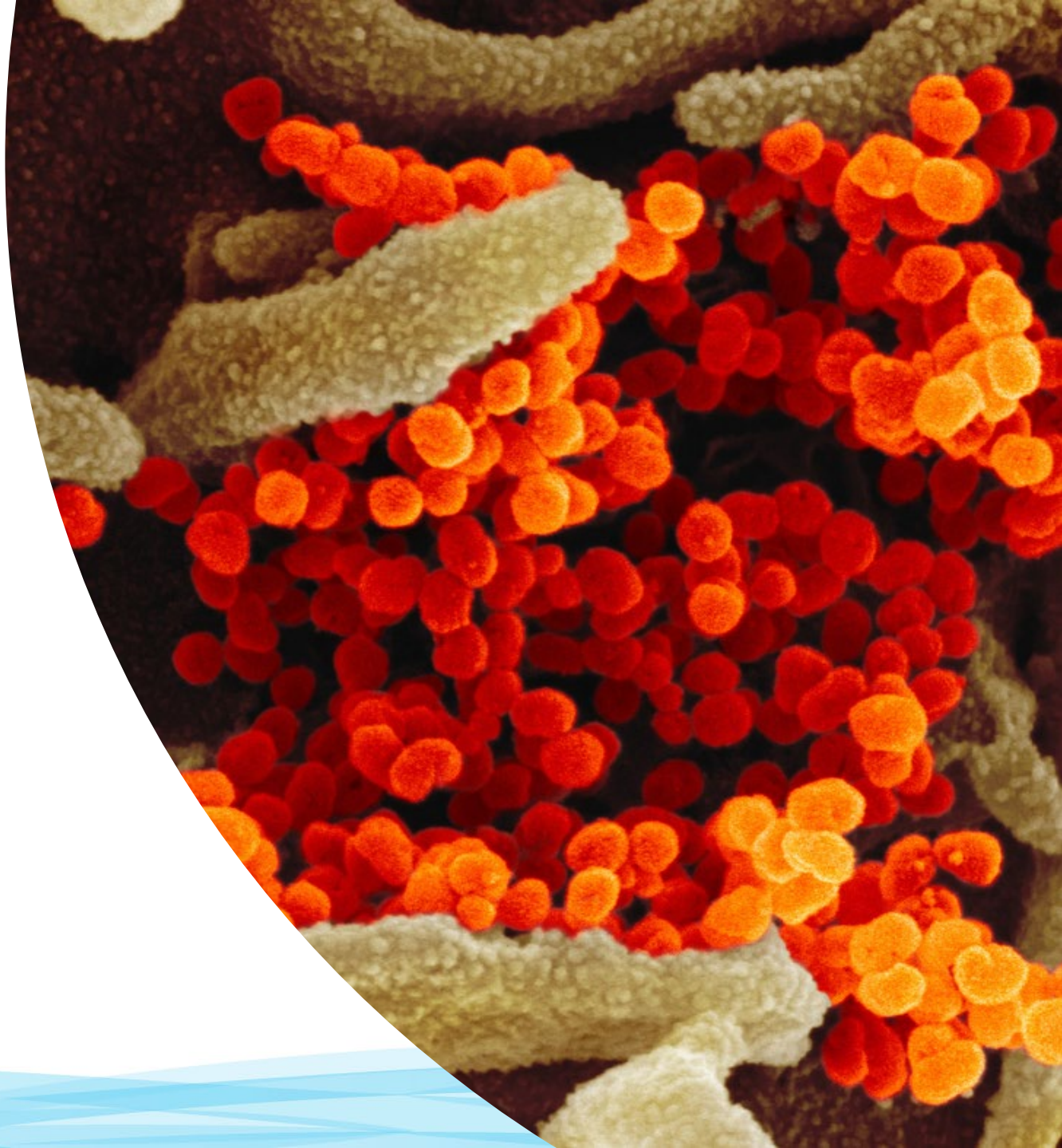
Wastewater Epidemiological Studies

- The Water Department is participating in two National Studies
- Multiple viral studies including:
  - SARS-CoV-2
  - Influenza A and B
  - RSV
  - Human Metapneumovirus
  - Norovirus
  - Rotavirus
  - Mpox
  - Hepatitis A
- Newly added Measles



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Illicit Drugs

- Development of data for public heath needs in disadvantaged communities.
- Data is collected from wastewater influent for:
  - Fentanyl
  - Cocaine
  - Methamphetamine
  - Xylazine

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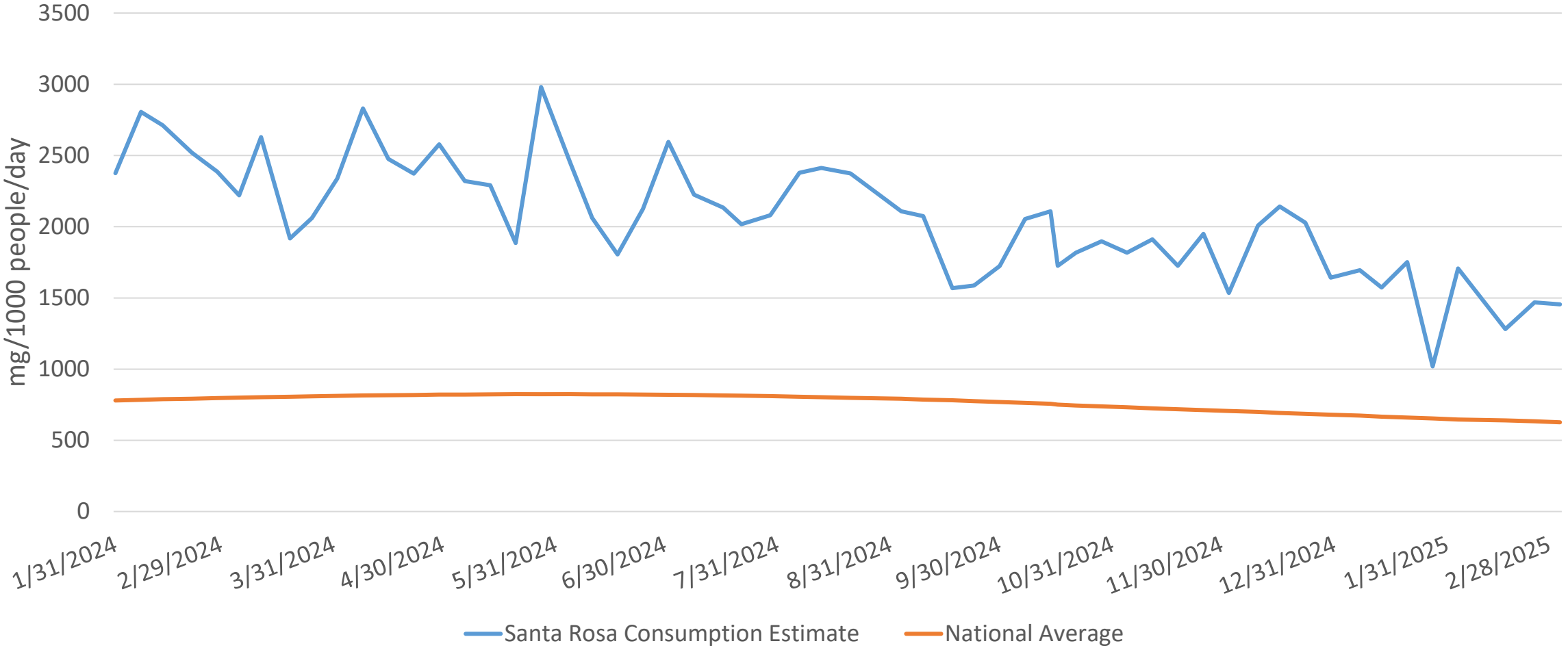
Methamphetamine



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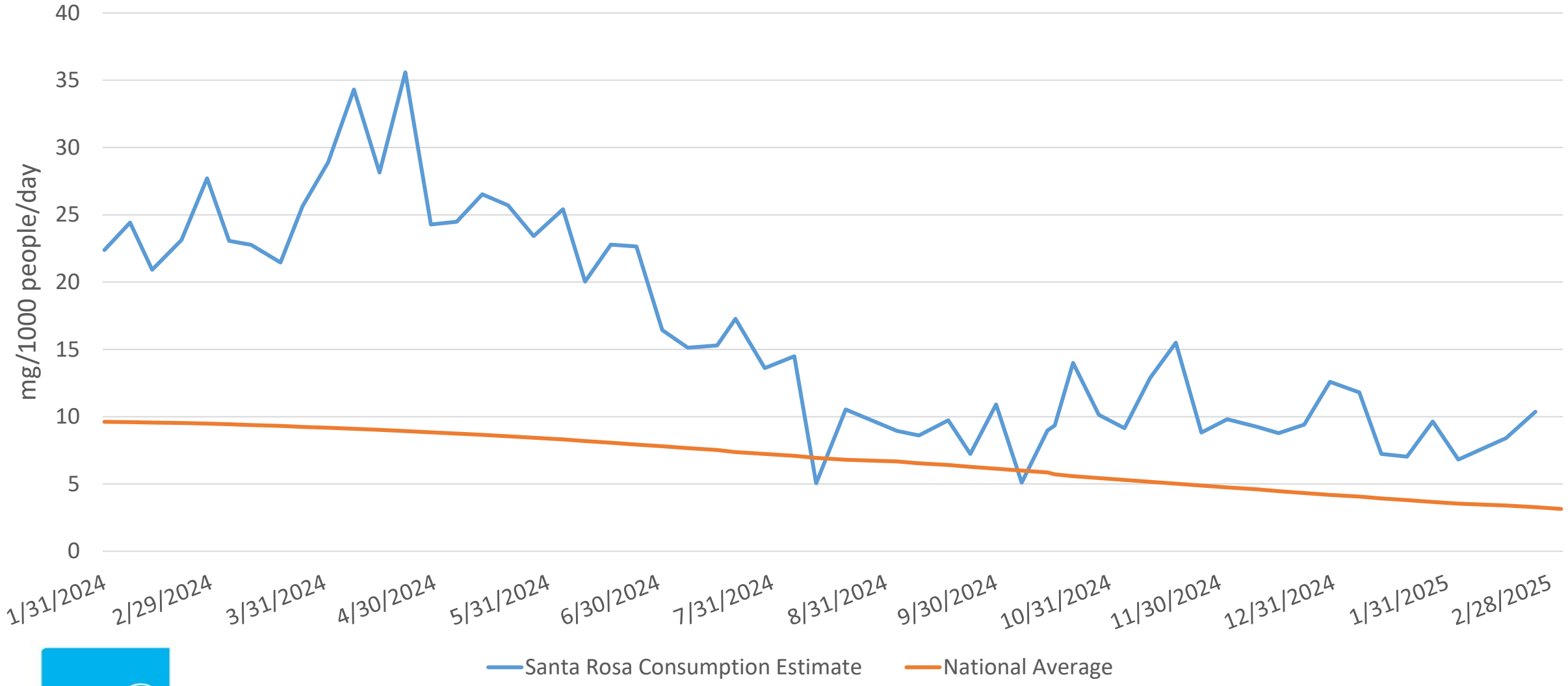
Fentanyl



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Thank you