

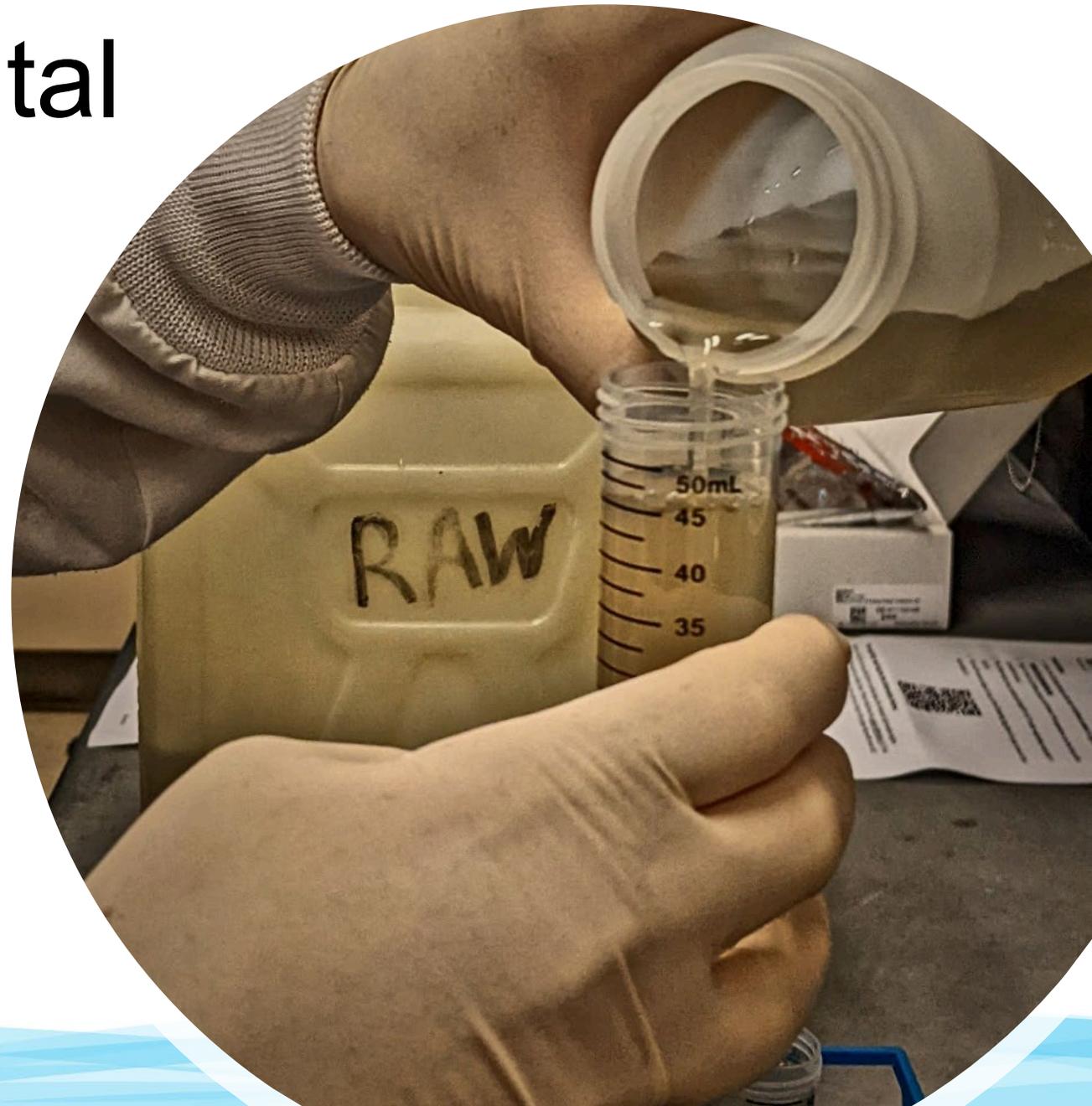
# Laguna Environmental Laboratory Update

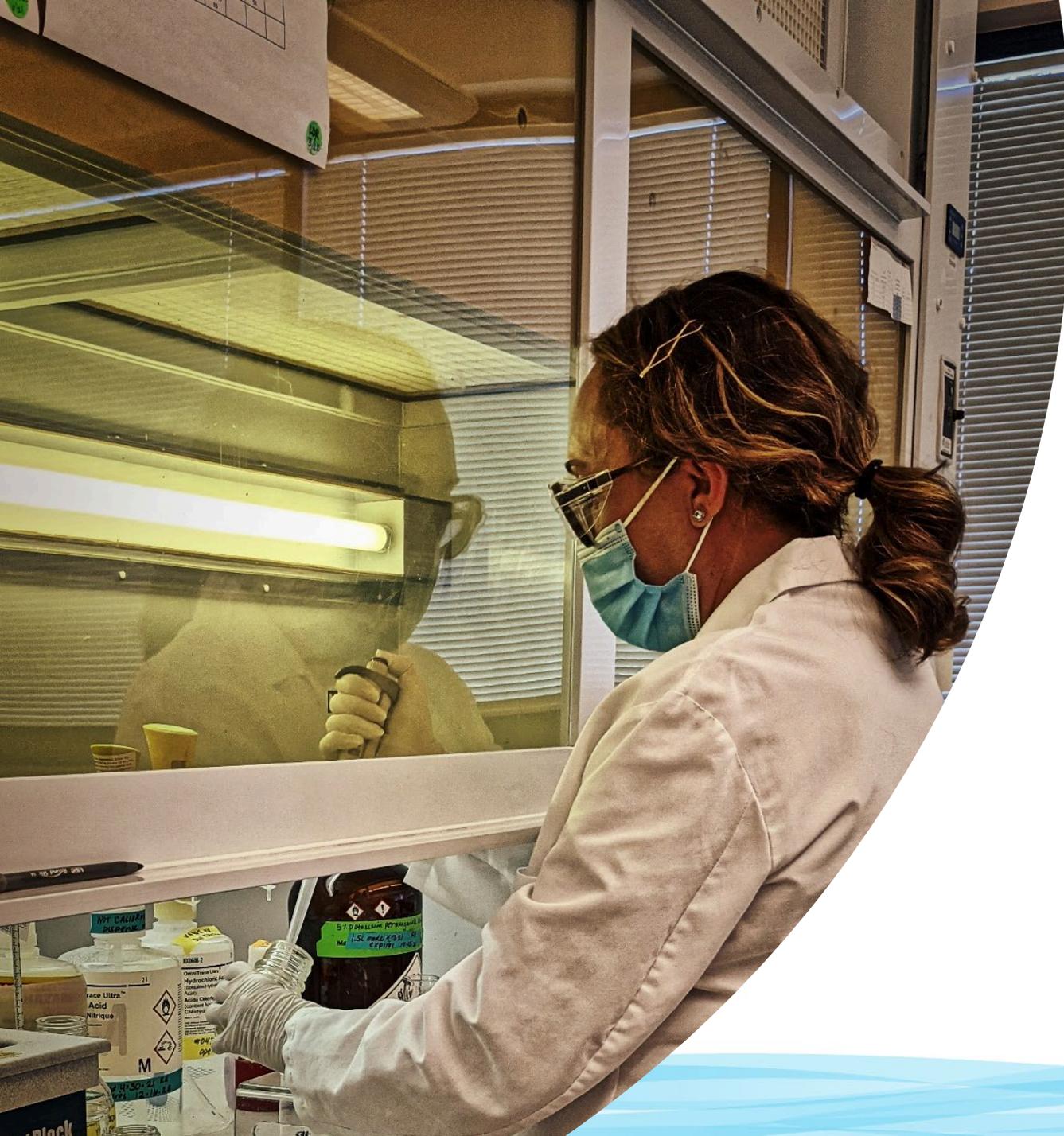
October 6, 2022  
Board of Public Utilities

Robert C. Wilson, Laboratory Supervisor



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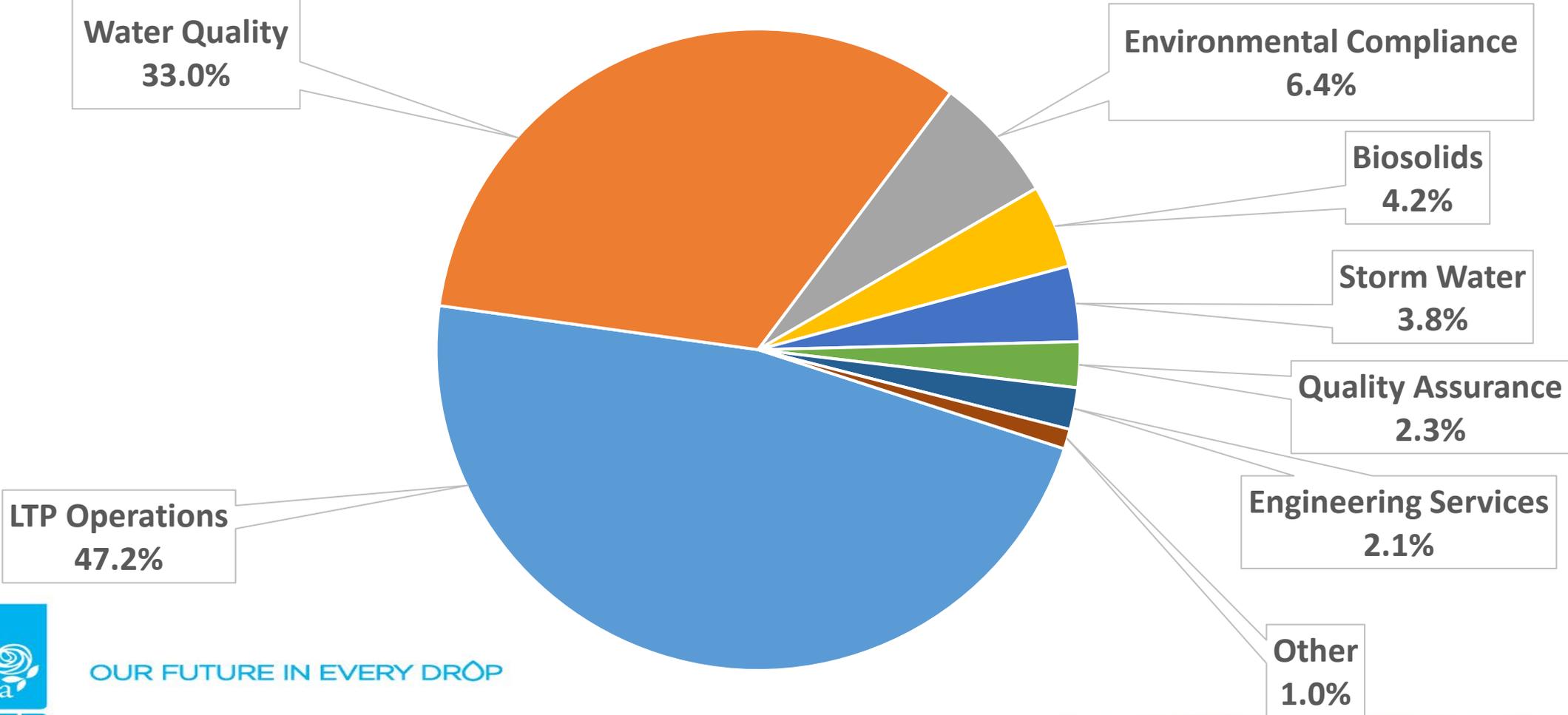




# Laguna Environmental Laboratory (LEL)

- 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 sample receiving and preparation, laboratory analysts, information technology and management for a total of 13 people
- Staff processed 19,108 samples in FY 2021/2022

# Laguna Environmental Laboratory Clients



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# Customer Service

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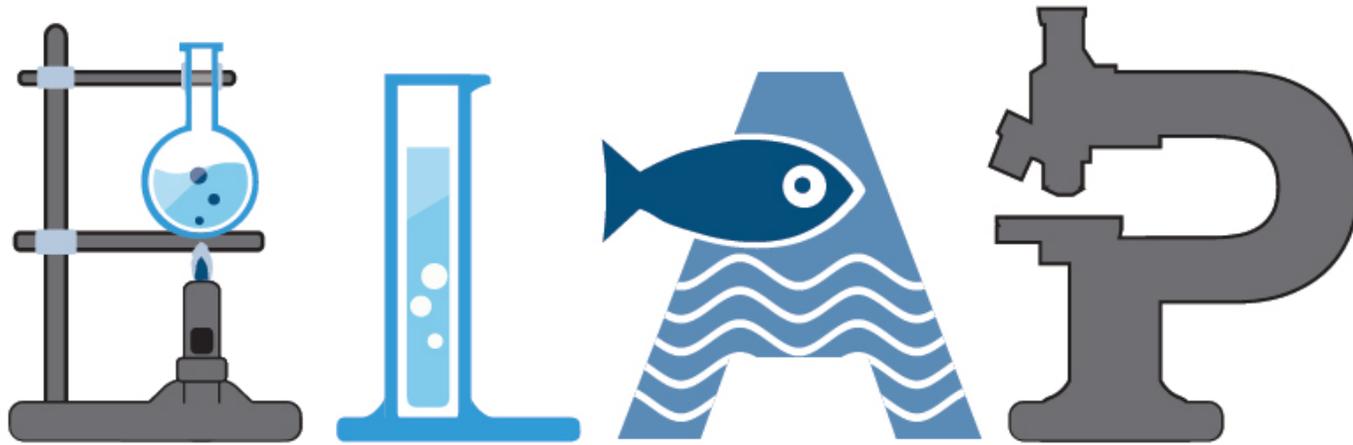
- Upload data for drinking water and wastewater reporting
- Quality Assurance Coordinator conducts sample training for legally defensible data
- Work with clients to provide sample assistance and bottle kits
- Consulting services for Police and Fire
- Support compliance with Contaminates of Emerging Concerns (CECs)



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# Maintaining Accreditation



**Environmental Laboratory Accreditation Program**  
STATE WATER RESOURCES CONTROL BOARD

- Environmental Laboratory Accreditation Program (ELAP)
  - Accreditation body for environmental laboratories in California
  - Adopted The NELAC Institute (TNI) standard with laboratories needing to adopt changes by January 2024
  - Updates to the City Program are focused with the Quality Assurance Program

# The NELAC Institute

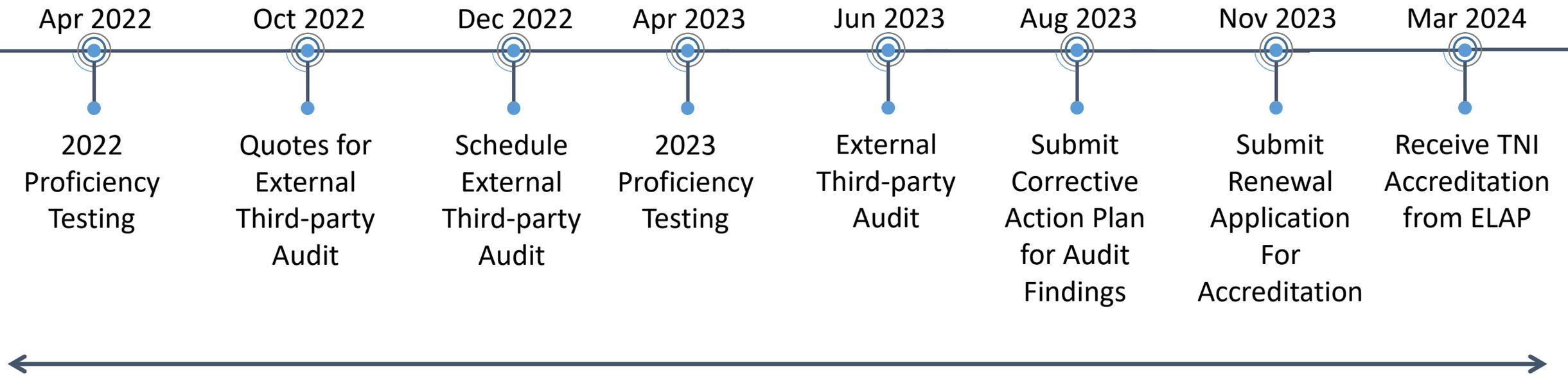
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- NELAC is the National Environmental Laboratories Accreditation Conference.
- To comply with the new standard the LEL will need to make 855 changes to Quality Assurance Programs with few changes regarding how testing is performed at the bench.
- TNI is Based on the International Organization for Standardization (ISO) and uses format and language consistent with ISO.



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Updating: Quality Assurance Manual, Standard Operating Procedure Documentation, Bench Sheets, ETC...  
&  
Laboratory Training

## TNI Compliance Timeline

- Quality Assurance Coordinator and the Laboratory Supervisor to maintain timeline
- New Supervising Analyst
- Support from ChemVal Consulting



## Equipment Replacement (2020-2022)

- LEL staff provides basic maintenance on equipment
- Equipment beyond service life and not supported by manufacturer



# Equipment Replacement 2020 - 2022



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- Gas Chromatograph/Mass Spectrometer (Volatiles)
- Type I Deionized Water Systems
- rAPID-T (Cyanide)
- Ion Chromatograph (Nutrients)
- Inductively Coupled Plasma Mass Spectrometry (Low Level Metals)
- Cold Vapor Atomic Fluorescence (Low Level Mercury)
- Cold Vapor Atomic Absorbance (Mercury)
- Gas Chromatograph (Semi-volatiles)
- Gas Chromatograph/Mass Spectrometer (Pesticides)

# Future Projects

- Potential new analytical requirements for CECs including PFAS and Microplastics
- Wastewater Epidemiological studies
  - COVID
  - Monkey Pox
- Microbial Source Tracking for pathogens



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Thank you



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