

SONOMA COUNTY PUBLIC HEALTH LAB

Business Report December 2021

The core mandate for Sonoma County Public Health Lab (SCPHL) is focused on the screening, detection, prevention, protection, surveillance and assessment of infectious diseases throughout the service region. SCPHL's work supports the County health officer whose patients comprise the Sonoma County community. In addition, SCPHL serves as the local infectious disease reference laboratory for all clinical laboratories within the same jurisdiction.

The SCPHL's team of dedicated health professionals provide specimen testing services to the counties of Sonoma, Mendocino, Lake, and Humboldt in Northern California. Led by Public Health Laboratory Director Rachel Rees, our laboratory also provides training and reference testing to clinical laboratories, along with laboratory support for the diagnosis and control of communicable diseases to private medical providers.

Most importantly, the SCPHL provides services in response to public health crises as they arise. Recently, that has included a significant focus on COVID. When Public Health Labs are not tackling outbreaks, emergencies and bioterrorism threats, they test for common and uncommon diseases circulating in the community. Data generated by SCPHL alerts communicable disease, health providers and environmental health professionals to take appropriate action.

Communicable disease testing services include tuberculosis, whooping cough, sexually transmitted infections, and measles. Environmental services include testing local drinking water, river and ocean beaches, and farmed shellfish for fecal contamination; rabies testing; and testing ticks for Lyme disease. SCPHL facilitates the interaction between the health care community and state and federal agencies for unusual and exotic diseases testing, and provides training and reference testing to local clinical laboratories. SCPHL is the only public health lab between San Francisco and Humboldt Counties.

BSL-3 Laboratory Status – Laboratory Response Network

As one of California's 14 Center for Disease Control Laboratory Response Network (LRN) labs, the laboratory plays a key role in public safety by providing emergency testing support to first responders and Northern California clinical laboratories for agents of bioterrorism. The SCPHL currently provides these services for Sonoma, Mendocino, and Lake Counties.

Clinical Services Offered

- SARS-CoV-2 diagnostic PCR testing
- Whole-genome sequencing capacity
- CDC Laboratory Response Network (LRN) services for the detection of:
 - Measles, mumps, influenza, and norovirus
 - Agents of bioterrorism
- Mycobacteria (tuberculosis) culture and susceptibility testing
- Sexually transmitted disease testing
- Salmonella & Shigella confirmation/typing (mandated testing for California public health labs)
- Other Title 17 testing services (mandated testing for California public health labs)
 - Unusual/exotic disease testing (in coordination with State and CDC labs)

Environmental Services Offered

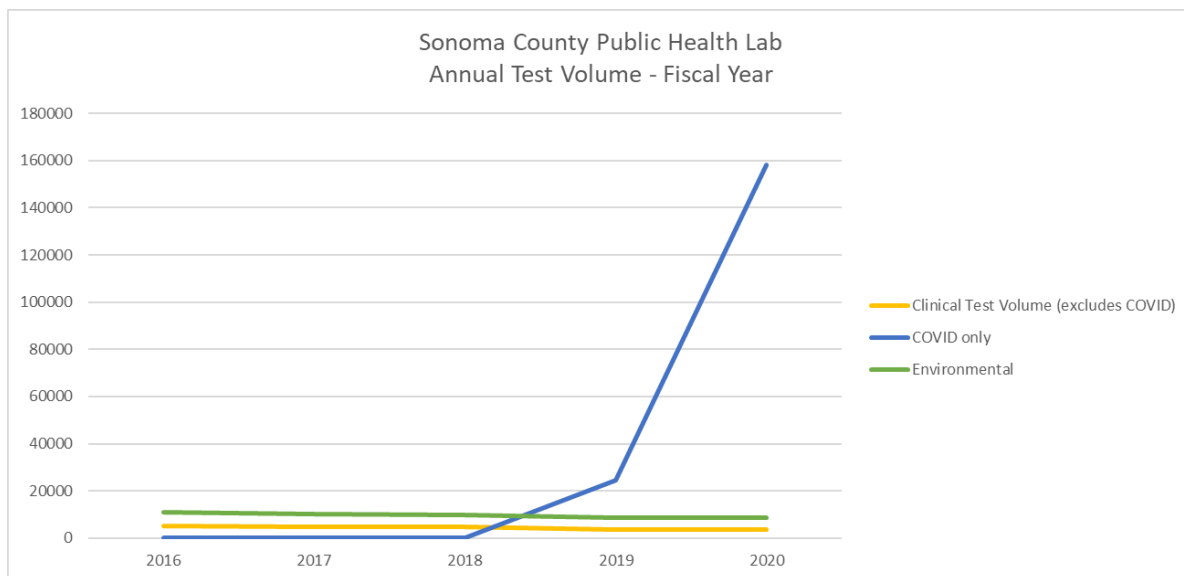
- Rabies testing (mandated testing for California public health labs)
- Drinking water testing; recreational water testing; and shellfish, meats, & growing water testing

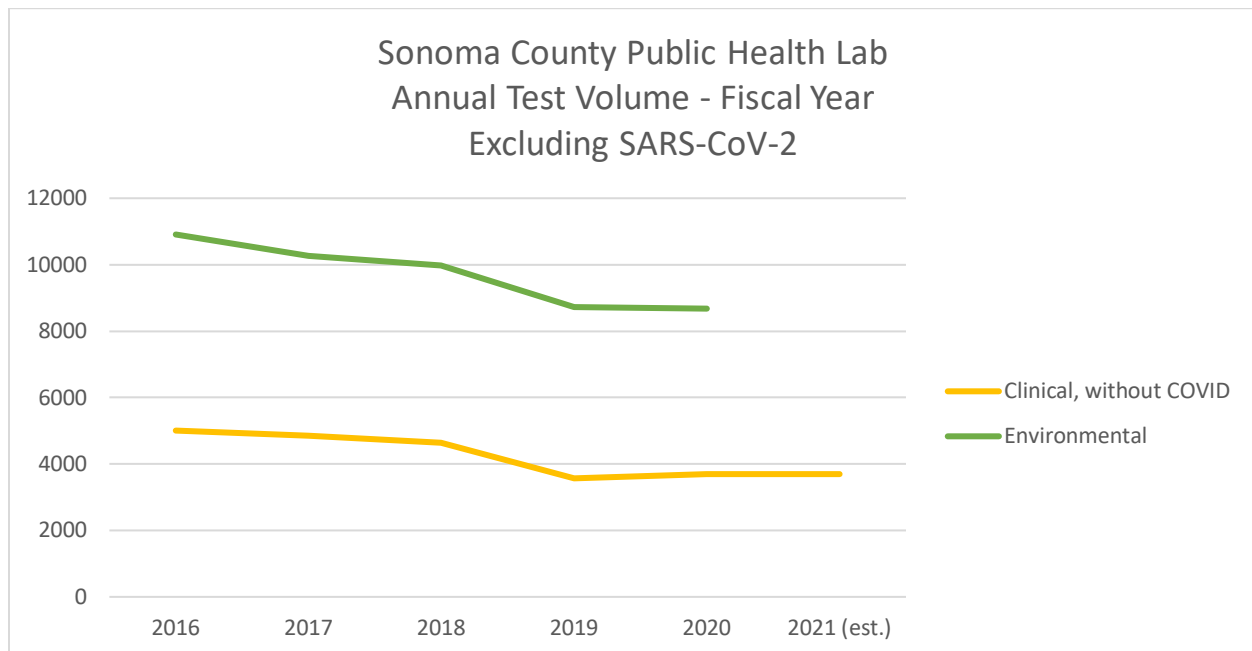
- One of only 4 labs in California providing shellfish testing
- Dairy testing
- Tick testing for Lyme disease

Laboratory Volume

The chart below details the type of tests provided by the laboratory for fiscal years 2016–2020, as well as the estimated volume for 2021.

Fiscal Year	Clinical, without COVID	Environmental	COVID only	Total Test Volume
2016	5,006	10,909	0	15,915
2017	4,858	10,272	0	15,130
2018	4,635	9,984	0	14,619
2019	3,568	8,722	24,425	36,715
2020	3,695	8,677	158,054	170,426
2021 (est.)	3,700	8,680	10,400	22,780





Services Provided to Other Counties

In addition to Sonoma County, the laboratory also provides services to our neighboring counties, including the following:

- CDC Laboratory Response Network (LRN) lab for Sonoma County, Mendocino, and Lake Counties
- Lake County: rabies and tick testing
- Humboldt County: mycobacteriology culture & PCR testing; backup LRN lab
- As part of our Sonoma County Environmental Health section, the County provides dairy inspections in Marin County and dairy product testing at the Sonoma County Public Health Laboratory.

Anticipated Level of Service for Future

There are many factors that play a part in determining a potential volume for our laboratory. Over the last two years, we have seen testing for SARS-CoV-2 fluctuate significantly due to surges, the introduction of the vaccine, and the emergence of variants. We anticipate a decrease in SARS-CoV-2 related testing in the future; however, the expected volume will remain high based on the current response.

- SARS-CoV-2 estimated “routine” test volume: ~200/week = 10,400/year for 2-3 years
- Clinical and Environmental volume will remain flat

The laboratory leadership will focus on expanding services utilizing new equipment and operational efficiencies recently added to the laboratory.

- Expand whole genome sequencing capacity
- Strengthen electronic data transfer capacity (electronic ordering & reporting via SacValley Health Information Exchange)
- Expand routine services to neighboring counties (Lake, Mendocino, Marin)
- Acquire additional reference testing from local health care facilities

Funding and Support for Program Costs

The laboratory is funded by a variety of resources. One of the benefits to the laboratory of the COVID outbreak was the significant grant funding from state and federal agencies in FYs 20-21 and 21-22. This

funding offset COVID-related staffing needs, equipment, and operational upgrades to existing systems, creating salary savings and laying the foundation for a modern and robust lab operating infrastructure

Funding for the laboratory comes from the following sources:

Approximate Lab Revenues FY21/22 (Ongoing)

1991 Health Realignment	\$968,000	Staffing and operating expenses
Fees collected	\$25,000	Staffing and operating expenses
Reimbursements from within DHS	\$144,000	Staffing
Reimbursements from other County Departments	\$9,500	Staffing and operating expenses
Public Health Emergency Preparedness Grant	\$282,000	Laboratory personnel, operating expenses, maintenance agreements on equipment
Infectious Disease Prevention & Control Local Infrastructure funds	\$71,000	Personnel, equipment, annual maintenance, SacValley Health Information Exchange
Tuberculosis Grant – Federal pass through from Disease Control	\$4,500	Staffing and operating expenses

Approximate COVID related (limited term) revenues FY21/22

Epidemiology and Laboratory Capacity Expansion	\$1,200,000	Whole genome sequencing analyzer, reagents, 3-year maintenance agreements on lab equipment (including those usually paid by PHEP), remote temperature monitoring system, courier services, Orchard Software training, other lab equipment, salary and benefits – new Asst. Laboratory Director
AMD/LRN Supplement 1 (LabAspire & Valencia COOP lab)	\$293,000	\$193k New Asst. Laboratory Director, \$100k COOP
AMD/LRN Supplement 2 (LRN Labs)	\$142,000	Orchard Software patient portal, SeqStudio genetic analysis software

Table of Acronyms

DrPH	Doctor of Public Health
ABB	American Board of Bioanalysis
PHM	Public Health Microbiologist
PHLD	Public Health Laboratory Director
PHL	Public Health Laboratory
DHS	Department of Health Services
SCPHL	Sonoma County Public Health Laboratory
LRN	Laboratory Response Network
CDC	Center for Disease Control

ELC	Epidemiology and Lab Capacity
AMD	Advanced Molecular Detection
ARPA	American Rescue Plan Act
COOP	Continuity of Operations Plan
TB	Tuberculosis
CDPH	California Department of Public Health
PHEP	Public Health Emergency Preparedness