

## SUBAWARD AGREEMENT

This Subaward Agreement, dated March 17, 2022, is made by and between APHL and the Subrecipient to authorize and provide a subaward of financial assistance to the Subrecipient for the Project. All capitalized terms are defined in Section 1 Below.

### Background

- I. Under the Cooperative Agreement, APHL has been approved to conduct the Project as part of the overall scope of programs to be financed or provided under the terms of the Notice(s) of Award from the Funding Agency for the current Cooperative Agreement funding year.
- II. The Subrecipient has requested financial assistance from APHL for the Project, and, in accordance with APHL’s subgrant and procurement requirements for a matter of this size, APHL selected the Subrecipient to receive financial support in connection with the Project.
- III. The Parties agree that the financial assistance to the Subrecipient for the Project will be subject to the terms and conditions specified in this Subaward Agreement.

### Agreement on Project Terms and Conditions

#### 1. Definitions.

- A. The following definitions apply to capitalized terms used in this Subaward Agreement:

<u>Capitalized Term</u>	<u>Meaning</u>
“ <u>Agreement</u> ”	Collectively, this Subaward Agreement and any Cooperative Agreement Funding Conditions, together with any other attachments, exhibits or appendices incorporated into this Subaward Agreement by reference
“ <u>APHL</u> ”	The Association of Public Health Laboratories, Inc., a nonprofit corporation organized under the laws of the District of Columbia
“ <u>Confidential Information</u> ”	Economic and financial information, information and materials obtained from interviews or surveys, membership and donor lists, business procedures, solicitation or contact methods, and any other information regarding the business of APHL; the term does not include information that: (i) is or becomes available from public sources through no wrongful act of the Subrecipient; (ii) is already lawfully in the Subrecipient’s possession prior to the date of this Subaward Agreement without an obligation of confidentiality, except for information disclosed during discussions related to this Subaward Agreement; (iii) is rightfully disclosed to the Subrecipient by a third party with no obligation of confidentiality; (iv) is independently developed by the Subrecipient; or (v) is required to be disclosed pursuant to any valid court or regulatory order served on the Subrecipient

<b><u>Capitalized Term</u></b>	<b><u>Meaning</u></b>
<b><u>“Cooperative Agreement”</u></b>	Cooperative Agreement Number NU60OE000104 (CFDA #93.322) with the Centers for Disease Control and Prevention (CDC) of HHS
<b><u>“Cooperative Agreement Funding Conditions”</u></b>	All of the Cooperative Agreement funding conditions imposed by the Funding Agency as specified on Exhibit A to this Subaward Agreement
<b><u>“End Date”</u></b>	June 15, 2022
<b><u>“FFATA”</u></b>	The Federal Funding Accountability and Transparency Act of 2006 (Pub. L. 109-282), as amended
<b><u>“Final Report Due Date”</u></b>	June 15, 2022
<b><u>“Funding Agency”</u></b>	Center for Disease Control and Prevention (CDC)
<b><u>“Materials”</u></b>	All articles, reports, and other materials produced by the Subrecipient pursuant to this Agreement
<b><u>“Maximum Assistance Amount”</u></b>	The maximum amount of financial assistance payable by APHL to the Subrecipient in support of the Project as specified in Section 5.A of this Subaward Agreement is \$34,938
<b><u>“Parties”</u></b> or <b><u>“Party”</u></b>	Collectively, APHL and the Subrecipient, and individually, either APHL or the Subrecipient
<b><u>“Period of Performance”</u></b>	The entire time period of the Project, beginning with the Start Date and concluding on the End Date
<b><u>“Project”</u></b>	The objective of the San Bernardino Wastewater Based Epidemiology (WBE) testing at the San Bernardino County Public Health laboratory (SBCPHL) is to serve the population through an effective surveillance method for disease and population monitoring. The key theme of the solution is to equip the laboratory with the necessary materials to mobilize WBE surveillance efforts. The laboratory will improve surveillance of infectious disease in underserved communities as a preventive care measure. The laboratory will work with other agencies in underserved neighborhoods to collect wastewater samples. Once collected, the laboratory will develop methods for concentration, detection and sequencing of coronavirus using high throughput systems. Ultimately, WBE would like to analyze samples from 45 different collection sites per week.
<b><u>“Start Date”</u></b>	April 21, 2022
<b><u>“Subrecipient”</u></b>	San Bernardino County Public Health Laboratory

**Capitalized  
Term**

**Meaning**

**“Uniform  
Guidance”**

The Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards of 2 CFR 200 and, if applicable, the Department of Health and Human Services’ implementing guidelines found at 45 CFR 75

**B.** Other capitalized terms used in this Agreement have the meaning given to those terms in the Cooperative Agreement Funding Conditions.

**2. Project Term; Specific Terms and Conditions of the Project.**

**A.** The term of this Agreement will begin on the Start Date and will conclude on the End Date.

**B.** The Parties will fulfill their respective obligations in accordance with the specifications and other terms and conditions contained in the Agreement.

**C.** In the event that the component documents that make up the Agreement contain conflicting terms or conditions, the following priority will apply:

**i.** The terms and conditions specified in the Cooperative Agreement Funding Conditions will prevail over this Subaward Agreement and any other attachment, exhibit or appendix; and

**ii.** The terms and conditions specified in this Subaward Agreement will prevail over any other attachment, exhibit or appendix.

**3. Financial Assistance.**

**A.** APHL awards financial assistance to the Subrecipient to support the Project in an amount not to exceed the Maximum Assistance Amount specified in Section 1. These funds will be paid on a cost-reimbursable, and subject to the conditions listed below.

**B.** The cost must be allowed to APHL by the Funding Agency. For further information, see the Uniform Guidance (an electronic copy of which is currently available at <http://www.ecfr.gov/cgi-bin/text-idx?SID=7423d2aa8c6a9e55a691805dd2bb7c54&mc=true&node=pt2.1.200&rgn=div5>).

**C.** The cost must be within the amounts and categories set forth in the Project budget in Exhibit B.

- D.** Expenses incurred before the Start Date or after the End Date are not eligible for reimbursement.
- E.** Indirect costs are eligible for reimbursement at the Subrecipient's federally negotiated rate of 18.261% of N/A costs.
- F.** Reimbursement of travel expenses is limited to the rates and standards authorized by APHL's policy governing travel by its staff.
- G.** Payment will be made in response to reimbursement requests submitted by the Subrecipient. The Subrecipient will submit reimbursement requests on a quarterly basis, with the first request submitted by June 15, 2022. Each reimbursement request must include (i) a detailed statement of actual expenses incurred for the quarter, and (ii) cumulative cost totals for each budget category. In the event any cost was incurred using a foreign currency, the Subrecipient must report that cost in U.S. Dollars using the exchange rate at the time the reimbursement request is submitted to APHL. The Subrecipient must include the following certification on each reimbursement request:

**By signing this invoice, the Subrecipient certifies that: (1) all information provided in the accompanying financial report is accurate, (2) it remains eligible to receive the requested funds, (3) its certifications in the Subaward Agreement remain valid, (4) all costs were actually incurred for the activities supported by the Subaward Agreement and are allowable, allocable, and reasonable, and (5) it remains in compliance with the Subaward Agreement and the Cooperative Agreement Funding Conditions.**

- H.** The Subrecipient will send reimbursement requests to:

Erin Morin, Associate Specialist, Environmental Health  
APHL  
8515 Georgia Avenue, Suite 700  
Silver Spring, MD 20910  
P: 240.485.2404853830  
F: 240.485.2700  
E: erin.morin@aphl.org

- I.** APHL will review and approve or reject each request. APHL may withhold reimbursement for a cost until the Subrecipient provides adequate documentation to substantiate the cost as allowable or proper. The undisputed portion of each reimbursement request will be paid within 30 days after APHL's receipt of the request.
- J.** The Subrecipient must submit all reimbursement requests to APHL no later than the Final Report Due Date so that the Subrecipient's expenses may be included in APHL's final report

to the CDC. **By signing below, the Subrecipient releases APHL from and waives all claims of any nature for non-payment based upon the Subrecipient’s failure to submit all reimbursement requests by this date.**

**K.** APHL is not responsible for payment of any amount other than the financial assistance specified in this Subaward Agreement.

**L.** In the event a cost reimbursed under this Agreement is later determined to be unallowable under the Cooperative Agreement, then the Subrecipient will reimburse APHL for that cost.

**4. Responsibilities of the Subrecipient.**

**A.** The Subrecipient will carry out the Project as described in Exhibit B.

**B.** The Subrecipient will assign these staff members to the Project: (i) Jessica Valdez, LRN Coordinator (ii) Linda Ward, Laboratory Director.

**C.** The Subrecipient will provide APHL with progress and financial reports according to the schedule in the table below. The Subrecipient will submit one electronic copy and, if requested by APHL, one bound paper copy or unbound copy of each report. The Subrecipient will prepare reports using a format and software programs agreed to in advance by APHL and will produce all reports in English.

Report	Submission Due Date
Final Report: detailing how the good purchased from APHL have/will enhance the labs wastewater surveillance capability and capacity	June 15, 2022
One electronic copy of a final Project report that, at a minimum, includes the following: <ol style="list-style-type: none"> <li>1. Statement of progress made toward the achievement of the Project’s originally stated aims</li> <li>2. Description of the results (positive or negative) considered significant</li> <li>3. A list of publications resulting from the Project, with plans, if any, for further or future publication</li> </ol>	By the Final Report Due Date
A complete inventory of all major equipment acquired or furnished under this Project with a unit acquisition cost of \$5,000 or more. The inventory list must include the following:	By the Final Report Due Date

<ol style="list-style-type: none"> <li>1. A description of each item</li> <li>2. A manufacturer serial and/or identification number for each item</li> <li>3. The acquisition date and cost for each unit</li> <li>4. The percentage of Cooperative Agreement funds used in the acquisition of each item</li> <li>5. Current condition or location of each item</li> </ol>	
<p>A final invention statement utilizing the form found at <a href="http://grants1.nih.gov/grants/hhs568.pdf">http://grants1.nih.gov/grants/hhs568.pdf</a>. If no inventions were conceived under the Project, a negative report is required.</p>	<p>By the Final Report Due Date</p>

**D.** The Subrecipient will not make any change in the Project that might affect its program or budget without APHL’s prior written approval. These types of changes include:

- i.** a change in the project activities or goals;
- ii.** either a change in the individuals serving in the project roles listed above or a reduction in the amount of time an individual will devote to the project;
- iii.** a change in the project budget;
- iv.** use of the funds provided by APHL for a different cost;
- v.** a change in the project schedule; or
- vi.** a transfer of the funds provided by APHL to another organization (except for the purchase of goods or services for use by the Subrecipient).

**E.** The Subrecipient will perform all of its obligations in a timely manner during the Period of Performance, and will comply with APHL’s instructions regarding the closeout process.

**F.** The Subrecipient may communicate with the Funding Agency about the Project only through APHL and will not communicate directly with the Funding Agency. In the event the Subrecipient desires to communicate with the Funding Agency about one or more topics, the Subrecipient will summarize the topics in a written notice to APHL and APHL will then pass on to the Funding Agency those topics it deems, in its sole discretion, advisable, appropriate or necessary.

**G.** The Subrecipient will be provided data that is free of identifiers that would permit linkages to individuals and free of variables that could lead to deductive disclosure of the identity of the individual subjects.

**H.** The Subrecipient will comply with all applicable laws in the performance of its project. The Subrecipient will comply with federal, state, and local health and safety standards applicable to its operations, and will establish and implement necessary measures to minimize

its employees' risk of injury and illness in activities related to this Subaward. If the Subrecipient is conducting activities outside the United States of America under this Agreement, the Subrecipient will coordinate as necessary with appropriate government authorities and will obtain appropriate licenses, permits, and approvals. The Subrecipient will ensure that it and its officers, directors, employees, agents, and contractors (regardless of nationality) (i) avoid any action that violates or appears to violate any governmental rule relating to ethics and integrity, (ii) avoid any corrupt practice (for example, offering or accepting bribes), and (iii) avoid any fraudulent practice (for example, falsifying financial records). The Subrecipient will immediately inform APHL of any violation of this provision, and will cooperate with APHL in taking corrective action. APHL will have the express right, in its sole and exclusive discretion, to require cessation of all work on the Project until these corrective actions have been taken by the Subrecipient.

**5. Subgrants or subcontracts.** The Subrecipient will not subgrant or subcontract its services under the Agreement without the prior written consent of APHL. The Subrecipient will contract in its own name with each sub-subrecipient or subcontractor under APHL-approved subgrants or subcontracts. The Subrecipient is responsible for (i) coordination and review of its sub-subrecipient's or subcontractor's work, (ii) paying any compensation and reimbursing any expenses authorized by sub-subaward or subcontract, and (iii) ensuring that any work performed by sub-subrecipient or subcontractor is performed in accordance with the terms of this Agreement.

**6. Consequences of Noncompliance.** If the Subrecipient fails to comply with the terms and conditions of this Subaward Agreement or the Cooperative Agreement Funding Conditions, APHL (in its sole and exclusive discretion) may take one or more of the following actions:

- A. temporarily withhold reimbursements;
- B. deny reimbursement of a noncompliant cost;
- C. demand a refund of noncompliant costs already reimbursed;
- D. suspend or terminate this Subaward; or
- E. take any other remedy that may be legally available.

**7. Examination of Records; Ongoing Monitoring of Subaward.**

A. The Subrecipient will cooperate with APHL in the audit of APHL that is required by the Uniform Guidance audit requirements and, if the Funding Agency is a part of the Department of Health and Human Services, as may be contained in the Department of Health and Human Services' Grants Policy Statement (dated January 1, 2007), as supplemented by any addenda in effect as of July 1, 2017 (an electronic copy of which is currently available at <https://www.hhs.gov/sites/default/files/grants/grants/policies-regulations/hhsgps107.pdf>). The

Subrecipient acknowledges that the standards set forth in 2 CFR Part 200 Subpart F will apply to audits of fiscal years beginning on or after 26 December 2014. The Comptroller General of the United States, the Funding Agency and the federal department to which it belongs, APHL, and their representatives have the right to access and examine any books, documents, papers, and records of the Subrecipient that involve transactions related to this Agreement, for the purpose of audit and making excerpts and transcriptions. The Subrecipient will maintain auditable records for at least four (4) years following the close of the Cooperative Agreement. Further, the Subrecipient will permit these representatives access to its facilities and personnel for the purpose of on-site inspections, and will provide information, as requested, to determine compliance with the Cooperative Agreement Funding Conditions.

**B.** The Subrecipient will provide APHL with a copy of any and all written communications received by the Subrecipient from an auditor related to Subrecipient's internal control over financial reporting requirements and communication with those charged with governance (including those in compliance with or related to Statement of Auditing Standards (SAS) 112 Communicating Internal Control related Matters Identified in an Audit and SAS 114 The Auditor's Communication with Those Charged With Governance). The Subrecipient will send APHL a copy of this written communications no more than five days after the Subrecipient receives the communication (or the Subrecipient may instruct any auditor it employs to deliver copies of this written communications to APHL at the same time copies are delivered to the Subrecipient, in which case the Subrecipient will promptly verify that APHL has received a copy).

**C.** The Subrecipient will also cooperate with APHL in its ongoing oversight and monitoring of the Project during the Period of Performance. In the event that APHL selects the Project or the Subrecipient for an inspection or audit during the Period of Performance, the Subrecipient will make its key staff available to APHL during normal business hours and upon reasonable notice for inspection or auditing purposes.

**8. Assurance.** If APHL, in good faith, has reason to believe that the Subrecipient does not intend to, is unable to or discontinues performing material obligations under this Subaward Agreement, APHL may demand in writing that the Subrecipient give a written assurance of its intent to perform. Failure by the Subrecipient to provide written assurance within the number of days specified in APHL's demand may, at APHL's option, be the basis for terminating this Subaward Agreement.

**9. Closeout Requirements.** The Subrecipient must submit Project closeout reports in a timely manner. Unless APHL approved a deadline extension, the Subrecipient must submit all Reports identified in Section 4.C. of this Subaward Agreement and other closeout reports by the Final Report Due Date.

**10. Termination of Cooperative Agreement.** If (i) funds are not appropriated or otherwise made available for the continued performance of the Cooperative Agreement, (ii) the Cooperative Agreement



is terminated or (iii) the Cooperative Agreement funds are reduced or eliminated for the Project, APHL may terminate this Subaward Agreement without penalty upon written notice to the Subrecipient.

**11. Prohibition against Lobbying.** No part of the Cooperative Agreement funds may be used for:

**A.** Publicity or propaganda purposes, for the preparation, distribution, or use of any kit, pamphlet, booklet, publication, electronic communication, radio, television, or video presentation, designed to support or defeat the enactment of legislation before the Congress or any state or local legislature or legislative body, except in presentation of the Congress or any state or local legislature itself, or designed to support or defeat any proposed or pending regulation, administrative action, or order issued by the executive branch of any state or local government itself.

**B.** Paying the salary or expenses of any grant or contract recipient, or agent acting for such recipient, related to any activity designed to influence the enactment of legislation, appropriations, regulation, administrative action, or Executive Order proposed or pending before the Congress or any state government, state legislature or local legislature or legislative body, other than normal and recognized executive-legislative relationships or participation by an agency or officer of a state, local or tribal government in policymaking and administrative processes within the executive branch of that government.

**C.** Any activity to advocate or promote any proposed, pending, or future Federal, state or local tax increase, or any proposed, pending, or future requirement or restriction on any legal consumer product, including its sale of marketing, including, but not limited to the advocacy or promotion of gun control.

**12. Prohibition on certain telecommunications and video surveillance services or equipment.** Pub. L. 115-232, section 889(a)(1)(B) prohibits executive agencies of the Federal Government from entering into, or extending or renewing, a contract with an entity that uses any equipment, system, or service that uses covered telecommunications equipment or services as a substantial or essential component of any system, or as critical technology as part of any system, on or after August 13, 2020, unless an exception applies or a waiver is granted. (An electronic version of Pub. L. 115-232, section 889(a)(1)(B) is currently available at: [https://www.acquisition.gov/FAR-Case-2019-009/889\\_Part\\_B](https://www.acquisition.gov/FAR-Case-2019-009/889_Part_B)).

**13. Certifications.** By signing this Subaward Agreement, the Subrecipient certifies the statements listed below. These certifications are material representations of facts upon which APHL relied when it agreed to provide the financial assistance to the Project.

**A. Debarment, Suspension, Ineligibility and Voluntary Exclusion** (not applicable to foreign governments or governmental entities, public international organizations, or foreign-government-owned or –controlled entities). The Subrecipient certifies that neither it nor its

principals is presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participation in this transaction by any Federal department or agency.

**B. Lobbying.** The Subrecipient certifies that:

**i.** No Federal appropriated funds have been paid or will be paid, by or on behalf of the Subrecipient, to any person for influencing or attempting to influence an officer or employee of an agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.

**ii.** If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the Cooperative Agreement supporting this Subaward, the Subrecipient will complete and submit Standard Form-LLL, "Disclosure of Lobbying Activities," in accordance with its instructions.

**C. No Delinquency on US Government Debts.** The Subrecipient certifies that it is not indebted to the United States government (including any unpaid Federal tax liability that has been assessed and for which all judicial and administrative remedies have been exhausted or have lapsed), nor does it have a judgment lien filed against it.

**D. Recent Felonies.** The Subrecipient certifies that it has not been convicted (nor has any of its officers or agents acting on behalf of the Subrecipient been convicted) of a felony criminal violation under any Federal or State law within the preceding twenty-four (24) months.

**14. Cap on Extramural Salaries.** The Consolidated Appropriations Act of 2012 (Pub. L. 112-74), as amended, limits the salary amount that may be awarded or charged to the Cooperative Agreement. None of the Federal Agency funds payable to the Subrecipient for Project may be used to pay the salary of an individual, through a grant, contract or other extramural mechanism, at a rate in excess of \$203,700 (the Executive Level II salary in the Federal Executive Pay scale in effect when the Cooperative Agreement was awarded by the Federal Agency). This salary limitation also applies to any subawards issued by the Subrecipient for the Project under this Subaward Agreement. The salary limitation does not limit how much salary the Subrecipient may pay an individual; it merely limits the amount that may be paid with Federal funds.

**15. Whistleblower Protections.**

**A.** This Subaward Agreement and employees of the Subrecipient working on the Project will be subject to the whistleblower rights and remedies in the pilot program in the Pilot Program for Enhancement of Contractor Employee Whistleblower Protections established at 41 U.S.C. §4712 by Section 828 of the National Defense Authorization Act for Fiscal Year 2013 (Pub. L. 112-239) and the Federal Acquisition Regulation §3.908.

**B.** The Subrecipient will inform its employees in writing, in the predominate language of the workforce, of employee whistleblower rights and protections under 41. U.S.C. §4712, as described in §3.908 of the Federal Acquisition Regulation.

**C.** The Subrecipient will insert the substance of this Section, including this subsection (iii), in all sub-subawards or subcontracts over the simplified acquisition threshold.

**16. Conflicts of Interest.** The Subrecipient, to the to the best of its knowledge and belief at this time, certifies that either (i) there are no relevant facts or circumstances which could give rise to an organizational conflict of interest, as defined in FAR Subpart 9.5 or (ii) the Subrecipient has disclosed all such relevant information as of the Agreement Date, and that it will disclose any actual or potential organizational conflict of interest that is discovered on or after the Agreement Date. During the Period of Performance, the Subrecipient will not enter into other contracts, awards or arrangements or otherwise engage in work that will conflict with the Subrecipient's obligations under this Subaward Agreement.

**17. FFATA Reporting Requirements.** In compliance with the requirements imposed under FFATA, the Subrecipient will complete and return Exhibit C.

**18. Copyright & Intellectual Property Rights.**

**A.** The Subrecipient retains all copyright rights to materials developed by it with the funding provided under this Agreement, subject to terms of (i) the Cooperative Agreement Funding Conditions and (ii) Section 18.B. below.

**B.** The Subrecipient hereby grants to APHL a royalty-free, non-exclusive, and irrevocable right to reproduce, publish, and otherwise use publications, data, and other copyrightable works developed by the Subrecipient under this Agreement for the purpose of furthering the general objectives of the Cooperative Agreement and meeting APHL's obligations under it.

**19. Indemnification.** APHL agrees to indemnify, defend (with counsel reasonably approved by Subrecipient) and hold harmless the Subrecipient and its authorized officers, employees, agents and volunteers from any and all claims, actions, losses, damages, and/or liability arising out of this contract from any cause whatsoever, including the acts, errors or omissions of any person and for any costs or

expenses incurred by the Subrecipient on account of any claim except where such indemnification is prohibited by law. This indemnification provision shall apply regardless of the existence or degree of fault of indemnitees. APHL’s indemnification obligation applies to the Subrecipient’s “active” as well as “passive” negligence but does not apply to the Subrecipient’s “sole negligence” or “willful misconduct” within the meaning of Civil Code Section 2782. The Subrecipient will defend and indemnify APHL against all claims, liabilities, damages and expenses (including reasonable attorney’s fees) arising out of any act, omission, negligence, misconduct or breach of this Subaward Agreement by the Subrecipient, its directors, officers, employees, subcontractors or agents while engaged in the performance of the Project.

**20. Insurance.** Unless prohibited from doing so pursuant to state law or regulation, the Subrecipient will maintain with a reputable insurance company policies of insurance providing an adequate level of coverage for all risks which may be incurred by the Subrecipient as a result of its performance of the Subaward Agreement (including death, personal injury or loss of or damage to property). Upon reasonable request from APHL, the Subrecipient will provide APHL with copies of such insurance policies or other evidence confirming the existence and extent of the coverage given by those policies.

**21. Confidentiality.** The Subrecipient will maintain in strict confidence any Confidential Information of APHL that the Subrecipient reviews, receives, or acquires in the performance of this Subaward. APHL will make efforts to clearly identify, preferably in writing, any Confidential Information. The Subrecipient may disclose Confidential Information to its accountants, counsel, and other financial and legal advisors with a need to know. If disclosure to a sub-subrecipient is necessary in order to carry out the Subrecipient’s work, the Subrecipient must obtain the sub-subrecipient’s agreement to abide by this confidentiality provision prior to disclosure.

**22. Representatives.** The following will act as a representative authorized to administer this Subaward Agreement on behalf:

<b>The Subrecipient</b>
351 North Mountain View Avenue San Bernardino, California 92415 United States Attn: Linda Ward, Laboratory Director P: 909-458-9430 F: 909-986-3590 E: lward@dph.sbcounty.gov
<b>APHL</b>
8515 Georgia Avenue, Suite 700 Silver Spring, MD 20910 Attn: Sarah Wright P: 240.485.2404852730 F: 240.485.2700

E: sarah.wright@aphl.org
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**23. Notices.** Any notice or request under this Agreement must be in writing **and must reference the APHL Agreement Number identified at the top of each page.** A Party may send notices (i) personally, (ii) by mail, with first class postage prepaid, certified and return receipt requested, or (iii) by delivery through a nationally recognized overnight delivery service, with confirmed delivery and charges prepaid or billed to shipper. A notice or request must be sent to addressees shown below, unless a different address or addressee is specified in writing by the receiving Party. On the same day that a notice is placed in the mail or with an overnight delivery service, a complete copy will also be transmitted by the sending Party to the receiving Party via email or facsimile.

<b>APHL</b>
8515 Georgia Avenue, Suite 700 Silver Spring, MD 20910 Attn: Scott J. Becker, MS, Chief Executive Office P: 240.485.2745 F: 240.485.2700 E: scott.becker@aphl.org
<i>With a copy to:</i> Attn: Troy Willitt, General Counsel P: 240.485.2716 F: 240.485.2700 E: troy.willitt@aphl.org
<b>The Subrecipient</b>
351 North Mountain View Avenue San Bernardino, California 92415 United States Attn: Linda Ward P: 909-458-9430 F: 909-986-3590 E: lward@dph.sbcounty.gov

**24. Survival.** The obligations and rights of the Parties which by their nature would continue beyond the termination or expiration of this Subaward Agreement will survive beyond the termination or expiration of this Subaward Agreement and remain in full force and effect. These obligations and rights include those set forth in the Sections entitled “Consequences of Noncompliance” and “Indemnification”.

**25. Non-Discrimination.** The Parties will not discriminate against any employee or applicant for employment because of race, color, religion, sex, age, national origin, sexual orientation, gender

identity, disability, genetic information, citizenship status, veteran status or any other classification protected by applicable law or regulation.

**26. Governing Law.** This Subaward Agreement is governed exclusively by the laws of the State of California.

**27. Governing Language.** In the event that this Subaward Agreement is produced in English and one or more foreign languages, this English language version of this Subaward Agreement is the official version and will govern if there is a conflict between this English language version and one or more of the foreign translations.

**28. Dispute Resolution.** The Parties agree that the sole jurisdiction and venue for any litigation arising from this Subaward Agreement is the appropriate federal or District court located in the State of California. If a dispute arises, the Parties will make a good faith attempt to resolve the dispute through dialogue and negotiation prior to pursuing court action.

**29. Independent Contractors.** The relationship between the Parties to this Agreement is that of independent contractors. This Agreement is not intended to create any association, partnership, joint venture, or agency relationship between the Parties.

**30. Assignability.** The Subrecipient will not assign this Agreement, or any interest in this Agreement, without the prior written consent of APHL.

**31. Successors.** This Agreement will be binding upon, and will inure to the benefit of, the Parties and their respective permitted successors and assigns.

**32. Sole Agreement.** This document contains the entire agreement between the Parties concerning the subject matter of this Agreement. It supersedes all prior and contemporaneous oral and written understandings.

**33. Amendment.** Except as is described in the following sentence, no amendment of this Agreement will be valid unless in writing and signed by both Parties. In the event the Parties seek to make a ministerial or non-substantive modification to this Agreement (such as a no-cost extension to the Period of Performance), APHL will send an email to the Subrecipient stating the terms of the proposed modification and, upon APHL's receipt of a reply email from the Subrecipient that confirms the Subrecipient's agreement with and consent to the proposed modification, the modification will be deemed approved and will be enforceable as if it were a formal written amendment to this Agreement.

**34. Waiver.** A Party's waiver of a breach is not to be deemed a waiver of any subsequent breach of the same term or of any other term. No waiver will be valid unless in writing and signed by the waiving Party.

- 35. Severability.** If any provision of this Subaward is held to be invalid, only that provision will be modified and the remaining provisions of this Subaward Agreement will not be affected and will continue in full force and effect. The invalid provision is to be deemed modified to the least degree necessary to remedy the invalidity.
- 36. Interpretation.** When used in this Subaward Agreement, the terms “include” or “including” are not limiting (such that the terms should be read as if stating “include without limitation” or “including without limitation” as applicable).
- 37. Section Headings.** The captions or headings in this Subaward Agreement are made for convenience and general reference only and should not be construed to describe or limit the scope or the intent of the provisions of this Subaward Agreement.
- 38. Drafting Party.** The Parties have participated jointly in the negotiation and drafting of this Subaward Agreement and each Party has had the opportunity to consult with, and to get assistance from the counsel and other advisors that Party deemed appropriate. In the event an ambiguity or question of intent or interpretation arises, this Subaward Agreement will be construed as jointly drafted by the Parties, and no presumption or burden of proof will arise favoring or disfavoring any Party by virtue of the authorship of any provision of this Subaward Agreement.
- 39. Counterparts.** The Parties may execute this Subaward Agreement in counterparts, each of which is deemed an original and all of which taken together constitute one original.
- 40. Signatures/E-delivery.** A manually signed copy of this Subaward Agreement delivered by facsimile, email or other means of electronic transmission will be deemed to have the same legal effect as delivery of an original signed copy of this Subaward Agreement.

*[Remainder of page intentionally left blank; signatures on the following page.]*

Each Party represents to the other Party that the individual signing below has the legal capacity and proper authority to do so and that, once signed on behalf of the Party, this Agreement will be enforceable against the Party in accordance with its terms and conditions.

**The Association of Public Health Laboratories, Inc.**

By: \_\_\_\_\_  
Name: Scott J. Becker, MS  
Title: Chief Executive Officer

**San Bernardino County Public Health Laboratory**

By: \_\_\_\_\_ Date: \_\_\_\_\_  
Name: Curt Hagman  
Title: Chairman, Board of Supervisors, San Bernardino County



**EXHIBIT A**

**COOPERATIVE AGREEMENT**  
**FUNDING CONDITIONS**

FOR COOPERATIVE AGREEMENT #NU60OE000104 (CFDA NO. 93.322)  
with the U.S. Centers for Disease Control and Prevention (CDC)

These Cooperative Agreement Funding Conditions (the “Funding Conditions”) have been attached as Exhibit A to a Project Agreement (as defined in Section 1 of these Funding Conditions) between APHL (as defined in the Project Agreement) and the Counterparty (as defined in Section 1 of these Funding Conditions) and have been incorporated into that Project Agreement by reference. These Funding Conditions, together with the Project Agreement and, if the Project Agreement is a Work Order, the Standard Terms and Conditions, make up the entire Agreement (as defined in the Project Agreement) between the Parties (as defined in the Project Agreement).

**1. Definitions.**

**A.** The term “Counterparty” is used in these Funding Conditions to refer to either (i) the Contractor under the Work Order or (ii) the Subrecipient under the Subaward Agreement, as applicable.

**B.** The term “Maximum Amount” is used in these Funding Conditions to refer to either (i) the Maximum Compensation Amount under the Work Order or (ii) the Maximum Assistance Amount under the Subaward Agreement, as applicable.

**C.** The term “Project Agreement” is used in these Funding Conditions to refer to either (i) the Work Order or (ii) the Subaward Agreement, as applicable, to which these Funding Conditions are attached as Exhibit A.

**2. Compliance with Funding Conditions.** This project is funded through the Cooperative Agreement (as defined in the Project Agreement) between APHL and the Centers for Disease Control and Prevention (“CDC”). The Counterparty will comply with the terms and conditions of the Cooperative Agreement.

**3. Uniform Administrative Requirements.** The US Office of Management and Budget’s Uniform Administrative Requirements (the “UAR”) found at 2 CFR Part 200, as implemented by the US Department of Health and Human Services (“DHHS”) at 45 CFR Part 75, apply to the terms of the Agreement. An electronic copy of DHHS’ UAR is currently available at <http://www.ecfr.gov/cgi-bin/text-idx?node=pt45.1.75> and the Counterparty will ensure that it has reviewed the applicable provision and will conduct the Project (as defined in the Project Agreement) in compliance with the UAR terms.

**4. HHS Grants Policy Statement.** The Cooperative Agreement is subject to the terms of the DHHS Grants Policy Statement (dated January 1, 2007), as supplemented by any addenda in effect as of July 1, 2020. An electronic copy of which is currently available at <https://www.hhs.gov/sites/default/files/>

[grants/grants/policies-regulations/hhsgps107.pdf](#) and the Counterparty will ensure that it has reviewed the applicable provisions and will conduct the Project in compliance with its terms.

**5. CDC General Terms and Conditions for Non-research Awards.** The Cooperative Agreement is subject to the CDC's General Terms and Conditions for Non-research Awards (an electronic copy of which is currently available at <https://www.cdc.gov/grants/documents/General-Terms-and-Conditions-Non-Research-Awards.pdf>). The Counterparty will ensure that it has reviewed the applicable provisions of these General Terms and Conditions for Non-research Awards and will conduct the Project in compliance with its terms.

**6. Lower Tier Transactions.** The Counterparty will include the provisions of these Funding Conditions as conditions of any subcontract or sub-subaward (with the subcontractor or sub-subrecipient agreeing to comply with these provisions as if it is the Counterparty). These provisions must be conditions of any subcontract, sub-subcontract, etc., governing a lower tier transaction.

**7. Public Policy Requirements.** The Counterparty will comply with each of the following laws and regulations as applicable to the Cooperative Agreement:

- A. Byrd Anti-Lobbying Amendment (31 U.S.C. §1352);
- B. Debarment and Suspension (Executive Orders 12549 and 12689);
- C. Equal Employment Opportunity regulations (Executive Order 11246, as amended by Executive Order 11375 and as supplemented by 41 CFR Part 60);
- D. Public Health Security and Bioterrorism Preparedness and Response Act of 2002, as amended (42 U.S.C. §§201 et seq.);
- E. Uniting and Strengthening America by Providing Appropriate Tools Required to Intercept and Obstruct Terrorism Act of 2001, as amended (USA PATRIOT Act) (Pub. L. 107-56); and
- F. Non-Discrimination Acts, including: (a) Title VI of the Civil Rights Act of 1964, as amended (42 U.S.C. §§2000d et seq.) which prohibits discrimination on the basis of race, color or national origin (not applicable to foreign (non-US) organizations); (b) Title IX of the Education Amendments of 1972, as amended (20 U.S.C. §§1681-1683, and 1685-1686), which prohibits discrimination on the basis of sex (not applicable to foreign (non-US) organizations); (c) Section 504 of the Rehabilitation Act of 1973, as amended (29 U.S.C. §794), which prohibits discrimination on the basis of handicap (not applicable to foreign (non-US) organizations); (d) the Age Discrimination Act of 1975, as amended (42 U.S.C. §§6101 et seq.), which prohibits discrimination on the basis of age (not applicable to foreign (non-US) organizations); (e) the Drug Abuse Office and Treatment Act of 1972 (Pub. L. 92-255), as amended, relating to nondiscrimination on the basis of drug abuse; (f) the Comprehensive Alcohol Abuse and Alcoholism Prevention, Treatment and Rehabilitation Act of 1970 (Pub. L. 91-616), as amended,

relating to nondiscrimination on the basis of alcohol abuse or alcoholism; (g) §§523 and 527 of the Public Health Service Act of 1912, as amended (42 U.S.C. §§290 dd-3 and 290 ee-3), relating to confidentiality of alcohol and drug abuse patient records; and (h) any other nondiscrimination provisions in the specific statute(s) under which the Cooperative Agreement was made, or any other nondiscrimination statute(s) which may otherwise apply to the Cooperative Agreement.

**8. Bayh-Dole Act.** Inventions conceived or first actually reduced to practice by the Counterparty in the performance of experimental, developmental, or research work under the Agreement are subject to the Bayh-Dole Act (37 CFR Part 401) and the standard patent right clauses (37 CFR Part 401.14).

**9. Equipment & Products.**

**A.** Purchases of equipment and products under the Agreement are subject to the Buy American Act of 1933, as amended (41 U.S.C. §§8302 *et seq.*), which requires the purchase of American-made equipment and products to the greatest extent practicable.

**B.** The CDC defines “equipment” as tangible non-expendable personal property (including exempt property) charged directly to the Project Agreement having a useful life of more than one year and an acquisition cost of \$5,000 or more per unit but the Counterparty is permitted to have a lower threshold consistent with its policies. The Counterparty will provide APHL with information or documentation regarding its procurement policies if it has established a lower threshold.

**10. Travel.** Travel within and outside the US under the Agreement is subject to the Fly America Act, as amended (49 U.S.C. §40118), which requires utilization of US-flag carriers to the greatest extent practicable (generally regardless of cost, convenience, and personal travel preferences).

**11. Publications and Publicity.**

**A.** Any (a) publication, paper or journal article relating to or (b) press release, article, report, or other material publicizing or resulting from the Counterparty’s work or services under the Agreement must include an acknowledgment that the Project was supported by CDC. The Counterparty will use the following disclaimer and acknowledgment of support:

“This publication (journal article, etc.) was supported by the Cooperative Agreement Number NU60OE000104, funded by the Centers for Disease Control and Prevention through the Association of Public Health Laboratories. Its contents are solely the responsibility of the authors and do not necessarily represent the official views of the Centers for Disease Control and Prevention, the Department of Health and Human Services, or the Association of Public Health Laboratories.”

**B.** When issuing statements, press releases, requests for proposals, bid solicitations and other documents describing the Project (as a project funded in whole or in part with federal money) such documents must clearly state:

- i.** the percentage of the total costs of the project which will be financed with Federal money;
- ii.** the dollar amount of Federal funds for the project or program; and
- iii.** the percentage and dollar amount of the total costs of the project that will be financed by non-governmental sources.

**C.** The US Government has a royalty-free, non-exclusive, and irrevocable right to reproduce, publish, and otherwise use publications, data, and other copyrightable works developed by the Counterparty under the Agreement. The US Government may also grant a sublicense of these rights to others to do so for Federal purposes.

**D.** For the purposes of this Section 10 of these Funding Conditions, “data” means recorded information, regardless of the form or media on which it may be recorded, and includes writings, films, sound recordings, pictorial reproductions, drawings, designs or other graphic representations, procedural manuals, forms, diagrams, work flow charts, equipment descriptions, data files, data processing or computer programs (software), statistical records, and other research data.

**12. Required Disclosures for Federal Awardee Performance and Integrity Information Systems (FAPIIS).**

**A.** In order to allow APHL to meet its obligations under 45 CFR 75.113, the Counterparty must disclose in a timely manner, in writing to APHL, with a copy to the HHS Office of Inspector General (OIG), all information related to violations of federal criminal law involving fraud, bribery, or gratuity violations potentially affecting the Project or the Cooperative Agreement.

**B.** The Counterparty’s failure to make any required disclosure may result in any of the remedies described in 45 CFR 75.371, including suspension or debarment (see 2 CFR parts 180 and 376, and 31 U.S.C. §3321). The Counterparty must send any required disclosure in writing to APHL and the HHS OIG at the following addresses:

APHL  
8515 Georgia Avenue, Suite 700  
Silver Spring, MD 20910  
ATTN: Legal Department  
Fax: 240.485.2700 (include APHL Agreement number in subject line) or  
Email: legal@aphl.org

AND

U.S. Department of Health and Human Services  
Office of the Inspector General  
ATTN: Mandatory Grant Disclosures, Intake Coordinator  
330 Independence Avenue, SW  
Cohen Building, Room 5527  
Washington, DC 20201  
Fax: (202)-205-0604 (Include "Mandatory Grant Disclosures" in subject line) or  
Email: MandatoryGranteeDisclosures@oig.hhs.gov

**13. Limitations on an Individual's Salary.** The Consolidated Appropriations Act of 2012 (Pub. L. 112-74), as amended, limits the salary amount that may be awarded or charged to the Cooperative Agreement. Cooperative Agreement funds may not be used to pay the salary of an individual at a rate in excess of \$203,700 (the Executive Level II salary in the Federal Executive Pay scale in effect at the time the Cooperative Agreement funds were awarded to APHL). Such amount reflects an individual's base salary exclusive of fringe and any income that an individual may be permitted to earn outside of his or her duties to the Counterparty. Such salary limitation also applies to any subcontracts or sub-subawards issued by the Counterparty for services to or work on the Project under the Project Agreement. The salary limitation does not limit how much salary the Counterparty may pay an individual, but simply limits the amount that may be awarded or charged to Cooperative Agreement funds.

**14. Whistleblower Protections.** In the event that the Maximum Amount is equal to or greater than \$100,000, the following provisions will apply.

**A.** The Agreement and employees of the Counterparty working on the Agreement will be subject to the whistleblower rights and remedies in the pilot program in the Pilot Program for Enhancement of Contractor Employee Whistleblower Protections established at 41 U.S.C. §4712 by Section 828 of the National Defense Authorization Act for Fiscal Year 2013 (Pub. L. 112-239) and Federal Acquisition Regulation ("FAR") §3.908.

**B.** The Counterparty will inform its employees in writing, in the predominate language of the workforce, of employee whistleblower rights and protections under 41. U.S.C. §4712, as described in §3.908 of FAR.

**C.** The Counterparty will insert the substance of this Section, including this subsection (C), in all subcontracts over the simplified acquisition threshold.

**15. Examination of Records.** The Counterparty will cooperate with APHL in the audit of APHL that is required by the UAR audit requirements found at 2 CFR Part 200 Subpart F or contained in the HHS Grants Policy Statement. The Counterparty acknowledges that the standards set forth in 2 CFR Part 200 Subpart F will apply to audits of fiscal years beginning on or after December 26, 2014. The Comptroller

General of the United States, DHHS, CDC, APHL, and their representatives have the right to access and examine any books, documents, papers, and records of the Counterparty that involve transactions related to the Agreement, for the purpose of audit and making excerpts and transcriptions. The Counterparty will maintain auditable records for at least four years following the close of the Cooperative Agreement. Further, the Counterparty will permit these representatives access to its facilities and personnel for the purpose of on-site inspections, and will provide information, as requested, to determine compliance with the Cooperative Agreement terms and conditions.

**16. Termination of Cooperative Agreement.** If (i) funds are not appropriated or otherwise made available for the continued performance of the Cooperative Agreement, (ii) the Cooperative Agreement is terminated or (iii) the Cooperative Agreement funds are reduced or eliminated for the Project, APHL may terminate the Agreement without penalty upon written notice to the Counterparty.

**17. Meetings and Conferences; Logo Use for Conferences and Other Meetings.** If the Project Agreement involves or is related to a meeting, conference or seminar, then the following provisions apply.

**A.** The Counterparty will include the following statement on conference or meeting materials, including promotional materials, agenda and internet sites:

“Funding for this conference was made possible (in part) by the U.S. Centers for Disease Control and Prevention. The views expressed in written conference materials or publications and by speakers and moderators do not necessarily reflect the official positions of the U.S. Department of Health and Human Services, nor does the mention of trade names, commercial practices or organizations imply endorsement by the U.S. Government.”

**B.** Neither the DHHS nor the CDC logo may be displayed if such display would cause confusion as to the conference source or give false impression of U.S. Government endorsement. Use of the DHHS logo is governed by U.S.C. §1320b-10, which prohibits misuse of the DHHS name and emblem in written communication. The Counterparty is prohibited from using the DHHS name or logo except as governed by U.S.C. §1320b-10. The appropriate use of the DHHS logo is subject to the review and approval of the DHHS Office of the Assistant Secretary for Public Affairs. Moreover, the Office of the Inspector General has the authority to impose civil monetary penalties for violations (see 42 CFR Part 1003). Neither the DHHS nor the CDC logo can be used on conference materials without the expressed, written consent of APHL (who, in turn, must receive such consent from the CDC).

**18. Certifications.** By signing the Project Agreement, the Counterparty certifies the statements listed below. These certifications are material representations of facts upon which APHL relied when it entered into this transaction.

**A. Debarment, Suspension, Ineligibility and Voluntary Exclusion.** The Counterparty certifies that neither it nor its principals is presently debarred, suspended, proposed for debarment,

declared ineligible, or voluntarily excluded from participation in this transaction by any Federal department or agency.

**B.**     Lobbying. The Counterparty certifies that:

i.       No Federal appropriated funds have been paid or will be paid, by or on behalf of the Counterparty, to any person for influencing or attempting to influence an officer or employee of an agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.

ii.      If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the Cooperative Agreement supporting this Agreement, the Counterparty will complete and submit Standard Form-LLL, "Disclosure of Lobbying Activities," in accordance with its instructions.

**C.**     No Delinquency on US Government Debts. The Counterparty certifies that it is not indebted to the US government, and does not have a judgment lien filed against it.

**D.**     Recent Felonies. The Counterparty certifies that it has not been convicted (nor has any of its officers or agents acting on behalf of the Counterparty been convicted) of a felony criminal violation under any Federal or State law within the preceding 24 months.

**E.**     Equal Opportunity Employer. The Counterparty certifies that it is an Equal Opportunity Employer in accordance with US law and regulation in effect as of the date of this Agreement.

*[End of Cooperative Agreement Funding Conditions]*

**EXHIBIT B**  
**The Project and Budget**

Please see the attached Project and Budget.



**EXHIBIT C**  
**FFATA Reporting Requirement**

Contractor/Award Recipient's Name:	San Bernardino County Public Health Laboratory
Amount of Award (obligated amount):	\$34,938
Funding Agency:	Center for Disease Control and Prevention (CDC)
CFDA Number: See the definition of the "Cooperative Agreement" in the Subaward Agreement.	Cooperative Agreement Number NU60OE000104 (CFDA #93.322) with the Centers for Disease Control and Prevention (CDC) of HHS
Award Title Descriptive of the Purpose of the Funding Action:	See definition of the "Project" in the Subaward Agreement.
<b>Contractor/Award Recipient's Location:</b>	
<b>Contractor/Award Recipient's Congressional District:</b>	
<b>Contractor/Award Recipient's Place of Performance:</b>	
<b>Contractor/Award Recipient's Place of Performance Congressional District:</b>	
<b>Contractor/Award Recipient's Unique Identifier (DUNS #):</b>	
<b>Contractor/Award Recipient's Unique Identifier of Parent Organization, if applicable (DUNS #):</b> <b>In order to determine whether you are required to provide executive compensation data, answer the following question(s):</b>	
1) In your business or organization's preceding completed fiscal year, did your business or organization (the legal entity to which this specific CCR record, represented by a DUNS number, belongs) receive:	

<p>a) 80 percent or more of your annual gross revenues in U.S. federal contracts, subcontracts, loans, grants, subgrants, and/or cooperative agreements?</p>			
<p>b) \$25,000,000 or more in annual gross revenues from U.S. federal contracts, subcontracts, loans, grants, subgrants, and/or cooperative agreements?</p>			
<p><b>If you selected 'Yes' for both a. and b. in question 1 please go to question 2.</b> If you selected 'No' for either or both a. and b. in question 1 you are done completing the form.</p>			
<p>2) Does the public have access to information about the compensation of the executives in your business or organization (the legal entity to which this specific CCR record, represented by a DUNS number, belongs) through periodic reports filed under section 13(a) or 15(d) of the Securities Exchange Act of 1934, as amended (15 U.S.C. §§78m(a), 78o(d)), or section 6104 of the Internal Revenue Code of 1986, as amended (26 U.S.C. §6104)?</p>			
<p>If you selected 'Yes' to question 2 you are done completing the form. <b>If you selected 'No' to question 2 please provide the names and total compensation for your five highest compensated executives</b> (i.e. officers, managing partners, or any other employees in management positions):</p>			
<p>Name:</p>		<p>Total Compensation:</p>	
<p>Name:</p>		<p>Total Compensation:</p>	
<p>Name:</p>		<p>Total Compensation:</p>	
<p>Name:</p>		<p>Total Compensation:</p>	
<p>Name:</p>		<p>Total Compensation:</p>	

**SAN BERNARDINO COUNTY PUBLIC HEALTH LABORATORY****PROPOSAL FOR APHL FUNDING****To Develop or Enhance Wastewater Surveillance Capability and Capacity in Environmental Health Laboratories****1. What are the laboratory's needs for this funding?**

The objective of the San Bernardino Wastewater Based Epidemiology (WBE) testing at the San Bernardino County Public Health laboratory (SBCPHL) is to serve the population through an effective surveillance method for disease and population monitoring. The key theme of the solution is to equip the laboratory with the necessary materials to mobilize WBE surveillance efforts. Our laboratory will improve surveillance of infectious disease in underserved communities as a preventive care measure. The identified needs include:

- Improve disease control response and surveillance using WBE early detection techniques.
- Develop high throughput methods to use WBE for COVID-19 incidence tracking and variant surveillance.
- Train communicable disease and laboratory staff on new WBE protocols and procedures.

**2. What is the laboratory's current wastewater surveillance capacity and capability?**

Our laboratory does not currently perform wastewater testing. We are collaborating with Loma Linda University's WBE research laboratory to collect wastewater samples, identify materials and equipment needed for WBE surveillance, and validate WBE processes and protocols. We have the equipment and supplies to support the surveillance and processing of SARS-CoV-2 clinical

The Project and Budget

samples including sample extraction equipment, virus rtPCR identification methods, sequencing technology and data reporting tools for disease surveillance data.

**3. How will the laboratory use the funds?**

a. Project description

Our laboratory will work with other agencies in underserved neighborhoods to collect wastewater samples. Once collected, our laboratory will develop methods for concentration, detection and sequencing of coronavirus using high throughput systems.

Ultimately, we would like to analyze samples from 45 different collection sites per week.

b. Project timeline

<b>Description</b>	<b>Approximate Dates</b>
Obtain materials, equipment, and personnel for WBE	March – June 2022
Develop collection protocols	March – June 2022
Develop, validate and train staff on high throughput lab test methods	June – August 2022
Implement collection and testing on wastewater samples	September 2022
Work with County Communicable Disease Section to provide surveillance data	September 2022

c. Description of the appropriate staff and their role(s) in the proposed wastewater surveillance projects(s).

<b>Staff Title</b>	<b>Program</b>	<b>Project Roles</b>
Communicable Disease Investigators	Communicable Disease	Wastewater sample collection
Laboratory Assistants	Public Health Lab	Validate and perform test methods for extraction, identification and sequencing of SARS-CoV-2

Public Health Microbiologist – Technical Supervisor	Public Health Lab	Supervise and train laboratory staff. Report results
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- d. Has your jurisdiction or laboratory received any alternate form on funding to increase wastewater surveillance capability and capacity, such as epidemiology and laboratory capacity (ELC) funding?

San Bernardino County’s Public Health laboratory has not received any alternative form of funding to specifically increase wastewater surveillance capability or capacity.

Epidemiology and laboratory capacity funding was used to purchase extraction and sequencing equipment and hire temporary staff.

**4. Budget and Justification**

The following is our laboratory’s proposed budget for developing high throughput wastewater surveillance for SARS-CoV-2. The table below describes each item to be purchased and includes a justification for use in this project. The ancillary equipment will be added onto existing extraction equipment. Expenditures not included are the cost for staff needed to perform testing.

**Revised Budget (March 8, 2022)**

Item	Budget Justification	Price
<b>Sample Collection</b>		

## EXHIBIT B

### The Project and Budget

PPE masks, face shields, gloves	Field sample collection personnel	\$200
HDPE sample containers 1L (autoclavable) x 50	Field sample collection	\$100
Zip lok bags for 1L containers x 200	Wastewater sample collection	\$40
Ice cooler for sample transport x 10	Sample transport	\$200
Autosampler x 4 (24V Stenner Pump, power bank, tubing and other)	Collection multiple times per week	\$3,236
<b>Raw Wastewater Concentration and RNA extraction on King Fisher</b>		
BRSV Zoetis virus vaccine	Spike into raw wastewater for recovery percentage	\$100
King Fisher Apex consumables	Consumables to run King Fisher apex	\$2,740
CERES nanosciences magnetic virus particles and enhancement reagent	Consumables to run CERES virus particles for first concentration step	\$4,705
Machery Nagel consumables for RNA extraction	Consumables to run RNA extraction with MN on King Fisher	\$3,124
BSL-3 Lab Gown, gloves and N-95 respirators (PPE)	PPE for staff working in BSL3 lab	\$200
Thermoscientific Kingfisher 24 deep well head	Magnet head for existing KingFisher extraction equipment	\$5,160
<b>rtPCR Analysis</b>		
TaqMan RT MasterMix	rtPCR	\$1,858
Applied Biosystems 96-well reaction plate	rtPCR	\$200
Human RNaseP transcript primer	Normalization of SARS CoV-2 N1	\$200
BRSV Primer Probe mix IDT 2000 assays	Calculate recovery percentage in a sample of wastewater assays	\$350
PPMoV primer Probe mix IDT 2000 assays	Estimate population density	\$350
FDA IDT N1/N2/Rp probe kit x 3	Run core PCR process	\$300
<b>Sequencing</b>		
SuperScript IV Vilo Master Mix	Library preparation	\$672
Q5 High-Fidelity 2X Master Mix	Library preparation	\$190
Qubit High Sensitivity DNA Kit	Library preparation	\$344
Qubit Assay Tubes	Library preparation	\$101

## EXHIBIT B

### The Project and Budget

Applied Biosystems 96-well reaction plate	Library preparation	\$200
Illumina DNA Prep (M) Tagmentation Kit	Library preparation	\$3945
Nextera DNA CD Indexes 96 Dual Index, plate format	Library preparation	\$638
<b>Supply and Equipment Total</b>		<b>\$29,154</b>
<b>7.75% Sales Tax and Shipping</b>		<b>\$5,784</b>
<b>Grand Total</b>		<b>\$34,938</b>