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July 10, 2018

ADOPTED

BOARD OF SUPERVISORS
COUNTY OF LOS ANGELES

15 July 10, 2018

CELIA ZAVALA
ACTING EXECUTIVE OFFICER



BOARD OF SUPERVISORS

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The Honorable Board of Supervisors
County of Los Angeles
383 Kenneth Hahn Hall of Administration
500 West Temple Street
Los Angeles, California 90012

Dear Supervisors:

**APPROVAL TO EXECUTE AN AMENDMENT TO A SOLE SOURCE SOFTWARE
AND SERVICES AGREEMENT NUMBER PH-001629 WITH ATLAS DATABASE
SOFTWARE CORPORATION dba ATLAS DEVELOPMENT CORPORATION
EFFECTIVE UPON BOARD APPROVAL THROUGH MAY 9, 2026
(ALL SUPERVISORIAL DISTRICTS) (3 VOTES)**

**CIO RECOMMENDATION: APPROVE (X) APPROVE WITH MODIFICATION ()
DISAPPROVE ()**

SUBJECT

Request approval to execute an Amendment to a Sole Source Software and Services Agreement with Atlas Database Software Corporation dba Atlas Development for the provision of an Integrated Reporting, Investigation, and Surveillance System, effective upon Board approval through May 9, 2026.

IT IS RECOMMENDED THAT THE BOARD:

1. Approve and instruct the Director of the Department of Public Health (DPH), or her designee, to execute an Amendment to Sole Source Agreement Number PH-001629, substantially similar to Exhibit I, with Atlas Database Software Corporation dba Atlas Development Corporation (Atlas) for the provision of the Integrated Reporting, Investigation, and Surveillance System (IRIS) to: (a) expand the existing Visual Confidential Morbidity Reporting (vCMR) system to serve as a single integrated reporting, case management, and surveillance system for DPH programs; (b) extend the term for a full eight (8) years with no optional terms, effective upon Board approval, through May 9, 2026; and (c) increase the maximum Agreement sum by \$11,182,520 from \$3,213,953 to

\$14,396,473, for the entire term of the Agreement. The cost of this project is jointly funded by Measure B, the Chief Executive Office (CEO) IT Legacy Systems Replacement Fund, Centers for Disease Control and Prevention (CDC) funding, and net County cost (NCC).

2. Delegate authority to the Director of DPH, or her designee, to execute Amendments to the above Agreement that allow an internal reallocation of funds between budget pools within the Agreement; allow the rollover of unspent Agreement funds; and increase or decrease the maximum sum by no more than ten percent (10%) of the amended maximum Agreement sum of \$14,396,473 which, if exercised, would not exceed \$1,439,647; and as otherwise stated in Section 8.3, Amendments, of the Agreement, all subject to review and approval by, as applicable, County Counsel and the Chief Information Officer (CIO).

3. Delegate authority to the Director of DPH, or her designee, to execute change orders to allow for additional work which does not require a change to the Agreement, provided the amounts payable under such change orders collectively do not exceed the available amount of dollars provided under the Agreement for such additional work; and as otherwise stated in Section 8.2, Change Orders, of the Agreement. Additional work dollars will be utilized for IRIS Electronic Lab Report Function, Electronic Initial Case Report Function, Syndromic Surveillance Function, and all other IRIS Functions to account for additional modifications, interfaces and/or additional products.

PURPOSE/JUSTIFICATION OF RECOMMENDED ACTION

DPH is seeking to expand the vCMR system in order to integrate disease surveillance and case management activities within DPH onto one platform. The vCMR system is a proprietary software product that was originally developed by Atlas to meet the disease surveillance and outbreak investigation requirements of DPH's Acute Communicable Disease Control (ACDC) program. The vCMR system also supports specific DPH processes related to the management of incoming communicable disease reports, outbreak investigations, foodborne illness reports, and electronic laboratory reports. In connection with this expansion, the vCMR system is being renamed to IRIS to reflect the integration into a single system.

The recommended actions will allow DPH to: (a) expand the vCMR system to serve as a single integrated reporting, case management, and surveillance system for all DPH programs; (b) continue to support DPH's epidemiological and outbreak investigation operations; (c) onboard other DPH programs including the Tuberculosis Control Program, the Division of HIV and STD Programs, Community Health Services, and the Public Health Investigation Administration; (d) implement new case management and contact investigation features to support field based operations; (e) retire legacy systems including the STD CaseWatch System and Tuberculosis Registry Information Management System (TRIMS); (f) develop data exchange capability with the Health Agency's On-line Real-Time Centralized Health Information Database (ORCHID) and the California Reportable Disease Information Exchange (CalREDIE), the State's electronic disease reporting and surveillance system; (g) expand Electronic Lab Reporting (ELR) and Syndromic Surveillance capability; and (h) add additional enhancements, such as mobile access and digital signature.

The expansion of IRIS will also include the expansion of the Community Reporting Module to allow providers to export data in various formats; configuration of IRIS to accept Electronic Initial Case Reporting (eICR) via the Atlas Electronic Health Record (EHR) Gateway; and improve system security and system availability through the migration of hosting to Amazon Web Services (AWS) solution. The transition to AWS is from the vendor's data center site in Calabasas. The vendor will continue to provide hosting services via AWS, as well as application maintenance and support. AWS

will provide the flexibility to quickly scale up the hosting infrastructure for IRIS as additional DPH programs are onboarded.

Approval of Recommendation 1 will allow DPH to: (a) expand the vCMR system to serve as a single integrated reporting, case management, and surveillance system for DPH programs; (b) extend the term for five (5) additional years and implement the three (3) optional years under the current Agreement for a total of eight (8) years with no additional optional terms through May 9, 2026; and (c) increase the maximum Agreement sum.

Approval of Recommendation 2 will allow DPH to execute amendments to the Agreement to allow an internal reallocation of funds between budget pools within the Agreement; allow the rollover of unspent Agreement funds; and increase or decrease the maximum Agreement sum by no more than ten percent (10%) of the amended maximum Agreement sum; and, as otherwise stated in Section 8.3, Amendments, of Agreement. Approval of Recommendation 3 will allow DPH to execute change orders to allow for additional work which does not require a change to the Agreement, provided the amounts payable under such change orders collectively do not exceed the available amount of dollars provided under the Agreement for such additional work; and as otherwise stated in Section 8.2, Change Orders, of the Agreement.

Implementation of Strategic Plan Goals

The recommended actions support strategy III.2 – Embrace Digital Government for the Benefit of Our Internal Customers and Communities, and strategy III.3, Pursue Operational Effectiveness, Fiscal Responsibility, and Accountability, of the County's Strategic Plan.

FISCAL IMPACT/FINANCING

The total cost for the eight (8) years of the Agreement is \$11,450,417. This includes \$267,897 of the previously authorized maximum Agreement sum which was not used during the first seven (7) years of the term, and is therefore being rolled over. Funding sources are as follows: 1) Measure B funding in the amount of \$4,800,000; 2) CEO IT Legacy Systems Replacement Fund in the amount of \$1,000,000; 3) CDC Sexually Transmitted Diseases (STD) Assessment, Assurance, Policy Development, and Prevention Strategies (AAPPS), in the amount of \$1,600,000; and 4) net County cost (NCC) in the amount of \$4,050,417.

Of the \$11,450,417 amount, \$2,832,000 is designated for additional work. Attachment A outlines the pricing for tasks and deliverables, maintenance fees, support services fees, hosting fees, and additional work for the eight (8) year term. The dollars available for additional work have been allocated as shown on Attachment A among various IRIS functions, and will be spent in accordance with the need for amendments and change orders. Unspent dollar amounts for additional work will be rolled over into future years of the Agreement term.

Funding is included in DPH's fiscal year (FY) 2018-19 Recommended Budget and will be included in future FYs, as necessary.

FACTS AND PROVISIONS/LEGAL REQUIREMENTS

On May 10, 2011, your Board approved County Agreement Number PH-001629, a sole source software and services agreement with Atlas, effective the date of Board approval for an initial term of seven (7) years, with an option to extend the term for up to three (3) additional years. Since then, the Agreement has undergone various amendments.

As required under Board Policy 5.100 (Sole Source Contracts), your Board was notified on August 23, 2017 of DPH's intent to enter into the recommended amendment (Exhibit II) with Atlas on a sole source basis in order to increase the Agreement's maximum obligation for purposes of expanding the vCMR system and to extend the term with Atlas.

Recent amendments to the Agreement have already made changes to existing provisions and added relatively new Board-required provisions, such as Time Off for Voting and Compliance with County's Zero Tolerance Human Trafficking Policy. The recommended amendment adds numerous information security provisions, including Board-required provisions regarding Protection of Electronic County Information – Data Encryption Standards. Regarding the latter provisions, the parties negotiated certain limits on Atlas's obligation to provide updates required to meet changes in these data encryption standards at no cost. Under the negotiated limits, Atlas is obligated to provide updates at no cost so long as they are considered commercially reasonable practices or best practices in the IT industry. DPH believes these limits are reasonable given that historical changes to these data encryption standards have been commercially reasonable and/or considered best practices in the IT industry. Further, if any data encryption standards are found to be outside the realm of commercially reasonable or best practices, Atlas is obligated to provide 175 development hours per year to implement such updates at no additional cost to the County.

County Counsel has reviewed and approved Exhibit I as to form. Consistent with your Board's policy on doing so, County Counsel has retained Drukker Law to work in conjunction with County Counsel regarding the recommended amendment.

The CIO concurs with the recommended actions. Attachment B is the CIO Analysis. Attachment C is the Sole Source Checklist signed by the CEO and submitted to your Board in connection with approval of County Agreement Number PH-001629.

CONTRACTING PROCESS

On May 10, 2011, your Board approved County Agreement Number PH-001629, a sole source software and services agreement with Atlas, effective Board approval for an initial term of seven (7) years with an option to add three (3) additional terms, for the provision of an electronic communicable disease reporting system known as the vCMR system. This Agreement was successor to several other Board agreements. Previous agreements addressed the use of CDC grant funds to design and develop the vCMR system specifically in accordance with DPH's specifications and the granting of certain marketing rights to Atlas. County Agreement Number PH-001629 changed the structure of the County's relationship with Atlas by transferring all County ownership of the vCMR system to Atlas in exchange for implementation of services in connection with a major upgrade to the vCMR system at no cost to the County, significant financial credits that applied to the County's payment obligations, a no-cost perpetual license for use of the vCMR system, and discounted rates for maintenance during the initial term of the Agreement.

On August 23, 2017, DPH notified your Board of DPH's intent to extend the term of the Agreement with Atlas to expand IRIS to serve as a single integrated reporting, case management, and surveillance system for DPH programs, on a sole source basis.

On April 25, 2018, DPH using delegated authority extended the term of the Agreement and increased the maximum Agreement sum by \$84,250, taking the total Agreement sum to \$3,213,953 for a period of up to 90 days. This 90-day extension was to allow DPH to effectively negotiate and

address issues raised by the current amendment (Exhibit I).

County Agreement Number PH-001629 was originally entered into on a sole source basis for the reasons described in Attachment C; therefore, it has not gone through the competitive bid process. The vCMR system continues to be a proprietary product, originally designed by Atlas for DPH specifically in accordance with DPH's requirements; there are no other vendors that can provide this software. Also, the vCMR system is compatible with the disease surveillance system platform currently in use by the State, which will allow DPH to seamlessly integrate with the State in order to meet DPH's reporting requirements.

IMPACT ON CURRENT SERVICES (OR PROJECTS)

Approval of the recommended actions will allow DPH to expand the vCMR system for use among other DPH programs in order to create IRIS, to enhance IRIS to meet DPH's current needs, and to allow for continued maintenance, support, and hosting of the expanded and enhanced IRIS.

Respectfully submitted,



Barbara Ferrer, PhD, MPH, MEd
Director

BF:ld

Enclosures

c: Executive Office, Board of Supervisors
Chief Executive Officer
County Counsel

Reviewed by:



WILLIAM KEHOE
Chief Information Officer

Contract # PH-001629

SOFTWARE AND SERVICES AGREEMENT

AMENDMENT NUMBER 11

PREAMBLE

THIS AMENDMENT NUMBER 11 (together with all Exhibits and Attachments hereto, "Amendment 11") is made and entered into this _____ day of _____, 2018 ("Amendment 11 Effective Date");

by and between

COUNTY OF LOS ANGELES
(hereafter "County"),

and

ATLAS DATABASE SOFTWARE CORP. (dba
Atlas Development Corporation) (hereafter
"Contractor").

RECITALS

WHEREAS, reference is made to that certain document entitled "SOFTWARE AND SERVICES AGREEMENT," dated May 10, 2011, and further identified as County Agreement No. PH-001629 and any amendments thereto prior to the date hereof (together with all exhibits and attachments thereto, all hereafter "Agreement"); and

WHEREAS, County desires to engage Contractor, and Contractor desires to be so engaged, to among other things (a) expand the System for use by the additional DPH programs identified on Attachment B.1 (Additional DPH Programs) to Exhibit B (Statement of Work) attached to this Amendment 11; (b) provide configuration, custom development, enhancement, data conversion, data migration, testing, training, implementation and deployment services with respect to the System Software for all DPH Programs (as defined below) as further described in

this Statement of Work; (c) develop of Interfaces as further described in Exhibit B (Statement of Work) attached to this Amendment 11; (d) prepare and implement the System Environments as further described in this Statement of Work as is necessary for the System Software (including the Work described in clauses (a) through (c)) to perform in accordance with the System Requirements and other Specifications; (e) convert and migrate data from County systems as further described in Exhibit B (Statement of Work) attached to this Amendment 11; and (e) continue to provide Additional Work, Maintenance Services, Support Services, and Hosting Services as further described Exhibit B (Statement of Work) attached to this Amendment 11, in each case, subject to the terms and conditions of this Amendment 11; and

WHEREAS, the Parties further desire to amend the Agreement to reflect that, in connection with the Work described in the immediately preceding recital, the System will now also be known as Integrated Reporting, Investigation, and Surveillance System or IRIS; and

WHEREAS, the Parties further desire to extend the Term of the Agreement beyond the 90-day extension provided for in Amendment Number 10, dated as of April 25, 2018, until May 9, 2026; and

WHEREAS, the Parties further desire to amend the Agreement to add new or update existing County-required terms and conditions and to make such other changes to the Agreement as specified in this Amendment 11, in each case, subject to the terms and conditions of this Amendment 11.

NOW THEREFORE, for good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the Parties agree as follows:

1. Incorporation of Recitals. The Recitals to this Amendment 11 are incorporated by this reference as if set forth herein.

2. Use of Capitalized Terms. Capitalized terms used in this Amendment 11 without definition have the meanings given to such terms in the Agreement.

3. Agreement Regarding Pre-Amendment 11 Effective Date Exhibit B (Statement of Work). Under Section 10.a of this Amendment 11, as of the Amendment 11 Effective Date, this Amendment 11 deletes the version of Exhibit B (Statement of Work) that was originally attached to the Agreement (“Prior Statement of Work”) and replaces it with Exhibit B (Statement of Work), together with Attachments B.1 (Additional DPH Programs) and B.2 (Deliverable Expectation Document), attached to this Amendment 11. As of the Amendment 11 Effective Date, the Parties acknowledge and agree that all Work under Tasks 1 through 12 of the Prior Statement of Work has been completed by Contractor and accepted by County under and in accordance with the Agreement prior to the Amendment 11 Effective Date, except for such Work that has been included in Exhibit B (Statement of Work) attached to this Amendment 11. Notwithstanding the foregoing, the Parties acknowledge and agree that all applicable Deliverables and other Work provided under the Prior Statement of Work, including, but not limited to, those constituting System Requirements and/or Specifications, shall continue to have full force and effect under the Agreement on and after the Amendment 11 Effective Date.

4. Agreement Regarding the Prior Change Orders. The Parties acknowledge and agree that as of the Amendment 11 Effective Date all Work under the Prior Change Orders has been completed by Contractor and accepted by County in accordance with the Agreement prior to the Amendment 11 Effective Date, and accordingly all Additional Modifications, Additional Interfaces and/or Additional Products under the Prior Change Orders are part of and are included in the System Software for all purposes under the Agreement. Notwithstanding the foregoing, the Parties acknowledge and agree that all applicable Deliverables and other Work provided under the Prior Change Orders, including, but not limited to, those constituting System

Requirements and/or Specifications, shall continue to have full force and effect under the Agreement on and after the Amendment 11 Effective Date.

5. Agreement Regarding the Interface with State of California's CalREDIE System.

The Parties acknowledge and agree that as of the Amendment 11 Effective Date, all Work required to fully implement interconnectivity of the System Software with the State of California's CalREDIE system has been added to the Statement of Work as Task 22 (CalREDIE Baseline Interface for Upgraded System) and Contractor is obligated to provide such Work in accordance with the Statement of Work and otherwise with the Agreement. The Parties further agree as follows regarding such Work:

a. Design specifications for the Interface with the State of California's CalREDIE system, as they exist as of the Amendment 11 Effective Date, are attached to Exhibit D (Description of System Software) as Attachment D.7 (Design Specifications for CalREDIE Interface). The Parties anticipate that California Department of Public Health ("CDPH") will publish the first release of such design specifications for such interface ("First Release") following the Amendment 11 Effective Date. When the First Release is so published, the Parties will enter into an Amendment in accordance with this Agreement to delete and replace Attachment D.7 (Design Specifications for the CalREDIE Interface) to show the final design specifications for such interface as reflected in the First Release.

b. Regardless of when the First Release is published, the Work under Task 22 (CalREDIE Baseline Interface for Upgraded System) of the Statement of Work shall consist of Contractor performing all Work necessary in order to complete and deliver a Baseline Interface based upon such First Release and for the System Software to exchange data and otherwise fully interconnect with the CalREDIE system using such Baseline Interface.

c. Any changes to the First Release published by CDPH following publication of the First Release are outside of the scope of Task 22 (CalREDIE Baseline Interface for Upgraded

System) of the Statement of Work and, if determined by County to be implemented, would constitute Additional Work.

d. Any reference in the Agreement to Contractor's obligation to fully implement interconnectivity of the System Software with the State of California's CalREDIE system by the date set forth in the Change Order or Amendment applicable to such Work shall be deemed to be by the date required by the Statement of Work.

6. Agreement Regarding the Interface with County's ORCHID System. The Parties acknowledge and agree that as of the Amendment 11 Effective Date, all Work required to fully implement an Interface between the System Software and County's ORCHID system has been added to the Statement of Work as Task 23 (ORCHID Baseline Interface for Upgraded System) and Contractor is obligated to provide such Work in accordance with the Statement of Work and otherwise with the Agreement. The Parties further agree as follows regarding such Work:

a. Design specifications for the Interface with the County's ORCHID system, as they exist as of the Amendment 11 Effective Date, are attached to Exhibit D (Description of Software) as Attachment D.8 (Design Specifications for ORCHID Interface). The Parties anticipate that the County will finalize the design specifications for the Interface with the County's ORCHID system following the Amendment 11 Effective Date. When the design specifications are so finalized, the Parties will enter into an Amendment in accordance with this Agreement to delete and replace Attachment D.8 (Design Specifications for the ORCHID Interface) to show the final design specifications for such Interface.

b. Regardless of when the design specifications are finalized by County, the Work under Task 23 (ORCHID Baseline Interface for Upgraded System) of the Statement of Work shall consist of Contractor performing all Work necessary in order to complete and deliver a Baseline Interface based upon such final design specifications.

c. All Deliverables under Task 23 (ORCHID Baseline Interface for Upgraded System) constitute T&M Deliverables (as defined below in this Amendment 11), and will be treated accordingly under the Agreement.

7. Agreement Regarding Requirements Gathering and User Defined Forms. The Parties acknowledge and agree that as of the Amendment 11 Effective Date, all Work that was previously contemplated to be completed pursuant to Change Orders regarding User Defined Forms (“UDFs”) for the DPH Programs, including to finish gathering System Requirements and Specifications, assess business processes and workflows, design and to fully configure such UDFs, and provide Documentation of the same, has been added to the Statement of Work as Task 26 (User Defined Forms for the Upgraded System), and Contractor is obligated to provide such Work in accordance with the Statement of Work and otherwise with the Agreement. The Parties further agree as follows regarding such Work:

a. The list of UDFs for which County currently expects Contractor to perform such Work is attached to Exhibit D (Description of Software) as Attachment D.9 (List of User Defined Forms).

b. The Parties anticipate that during the course of performing Work under Task 26, the Parties, together with the applicable DPH Programs, will agree upon a final list of UDFs. Once this list is agreed upon, the Parties will enter into an Amendment in accordance with this Agreement to delete and replace Attachment D.9 (List of User Defined Forms) to show the final agreed upon list of UDFs as well as System Requirements and Specifications therefor to be included in the Work to be performed by Contractor under Task 26 of the Statement of Work.

c. The not-to-exceed price included in Attachment C.2 (Tasks and Deliverables Detail) to Exhibit C (Schedule of Pricing and Payments) for all Deliverables under Task 26 of the Statement of Work includes sufficient funding to compensate Contractor in the event that all UDFs on Attachment D.9 (List of User Defined Forms) as of the Amendment 11 Effective Date

will be in the final agreed-upon list, and each such UDF requires Contractor to perform all Work described in the lead-in paragraph to this Section 7. The Parties, however, anticipate that not all UDFs on Attachment D.9 (List of User Defined Forms) may be necessary and that not every UDF will require this level of effort on the part of Contractor; for example, County will be able to take the lead on performing the configuration Work on one or more UDFs with Contractor providing guidance and assistance. Accordingly, as part of the process to agree upon a final list of UDFs as described in Section 7.b. above, the Parties shall agree upon a level of effort required for each UDF included in the final agreed-upon list and shall allocate a not-to-exceed amount to each Deliverable under Task 26 of the Statement of Work for each UDF (the aggregate of which for all Deliverables under Task 26 of the Statement of Work for all UDFs shall not exceed the not-to-exceed amount set forth on Attachment C.2 (Tasks and Deliverables Detail)), which is reflective of the agreed upon level of effort for such UDF. Contractor shall thereafter update each impacted T&M Estimate delivered under Paragraph 10.10 (Time and Materials Work) of the Base Agreement (as amended by this Amendment Number 11) to reflect this allocation.

d. Though ordered numerically after Task 19 (System Acceptance of Upgraded System) of the Statement of Work, it is anticipated that completion of all Work under Task 26 will occur prior to Task 19 (System Acceptance of Upgraded System), unless otherwise agreed to by County and reflected in the Project Charter.

e. All Deliverables under Task 26 of the Statement of Work constitute T&M Deliverables (as defined below in this Amendment 11), and will be treated accordingly under the Agreement.

8. Amendments to Base Agreement. As of the Amendment 11 Effective Date, the Base Agreement is amended as follows:

a. Paragraph 1.2 (Interpretation) is deleted in its entirety and replaced as follows:

COUNTY OF LOS ANGELES
ATLAS DEVELOPMENT CORPORATION
SOFTWARE AND SERVICES AGREEMENT
AMENDMENT NUMBER 11

“1.2 INTERPRETATION

In the event of any conflict or inconsistency in the definition or interpretation of any word, responsibility or schedule, or in the contents or description of any Task, Subtask, Deliverable, good, service, or other Work, or otherwise between this Base Agreement and the Exhibits or Attachments, such conflict or inconsistency shall be resolved by giving precedence first to this Base Agreement, and then to the Exhibits and Attachments according to the following priority:

Exhibit A	Additional Terms and Conditions
Attachment A.1	County's Administration
Attachment A.2	Contractor's Administration
Exhibit B	Statement of Work
Attachment B.1	Additional DPH Programs
Attachment B.2	Deliverable Expectation Document
Exhibit C	Schedule of Pricing and Payments
Attachment C.1	Term Year 1-7 Amounts
Attachment C.2	Task and Deliverable Detail
Attachment C.3	Maintenance Fees and License Fees Detail
Attachment C.4	Support Fees Detail
Attachment C.5	Hosting Fees Detail
Attachment C.6	Additional Work Dollars Detail
Attachment C.7	Optional Pricing
Exhibit D	Description of System Software
Attachment D.1	System Requirements for Upgraded System

Attachment D.2	System Definitions
Attachment D.3	List of Reports
Attachment D.4	List of Dashboards
Attachment D.5	Baseline Interface Requirements
Attachment D.6	List of Other Baseline Modifications for Upgraded System
Attachment D.7	Design Specifications for the CalREDIE Interface
Attachment D.7.1	Screenshots of CalREDIE Data Fields
Attachment D.8	Design Specifications for the ORCHID Interface
Attachment D.8.1	ORCHID List of Data Fields
Attachment D.9	List of User Defined Forms
Exhibit E	Minimum System Requirements
Exhibit F	Service Level Requirements
Attachment F.1	Guide to Customer Support Services
Attachment F.2	Electronic Lab Reporting (ELR) Maintenance and Support Guide
Attachment F.3	Disaster Recovery Plan
Exhibit G	Business Associate Agreement Under Health Insurance Portability and Accountability Act of 1996 (“HIPAA”)
Exhibit Q	Information Security Requirements
Attachment Q.1	Authentication Requirements
Attachment Q.2	Application Security Requirements
Attachment Q.3	SaaS Vendor Security and Privacy Assessment
Exhibit H	Invoice Discrepancy Report
Exhibit I	Contractor’s EEO Certification
Exhibit J	Acknowledgement, Confidentiality and Assignment Agreement

Exhibit K	Deliverable Acceptance Form
Exhibit L	Safely Surrendered Baby Law
Exhibit M	Jury Service Ordinance
Exhibit N-1	Source Code Escrow Agreement
Exhibit O	Intellectual Property Assignment
Exhibit P	Transferred Servers
Exhibit R	Previously Assigned Staff

b. Paragraph 2.0 (Definitions) is amended (i) to delete the defined term “Option Term” in its entirety and (ii) to delete the definitions of “Statement of Work” and/or “SOW,” “System,” and “System Requirements” and replace them in their entirety respectively as follows:

“Statement of Work” and/or “SOW” means the statement of Tasks, Subtasks, Deliverables, goods, services and other Work to be provided by Contractor under this Agreement, as specified in Exhibit B (Statement of Work) to this Agreement, including all Attachments thereto, as the same may be amended by any executed Amendment. For purposes of System Requirements and Specifications, “Statement of Work” and “SOW” include prior versions of Exhibit B (Statement of Work) that may be deleted and replaced by any executed Amendment.”

“System,” “Integrated Reporting, Investigation, and Surveillance System” and/or “IRIS” means the System Software, System Environment, Maintenance Services, Support Services, Hosting Services and Professional Services, including all components thereof.”

“System Requirements” means all operational, functional, technical, and other requirements regarding the System set forth in the Statement of Work, the Service Level Requirements, Exhibit D

(Description of System Software) and the Attachments thereto, Exhibit Q (Information Security Requirements) and the Attachments thereto, otherwise in this Agreement, and/or in any Deliverables under the Statement of Work and/or any executed Change Order or Amendment."

c. Paragraph 2.0 (Definitions) is amended to add the following definitions in the proper alphabetical order:

“Additional DPH Programs” has the meaning specified in the Statement of Work.”

“Additional eICR Dollars” means the pool of dollars available under this Agreement for Additional Work regarding eICR, which Additional Work outside of the scope of services then-described in this Agreement, including the Statement of Work and the Service Level Requirements.”

“Additional ELR Dollars” means the pool of dollars available under this Agreement for Additional Work regarding ELR, which Additional Work is outside of the scope of services then-described in this Agreement, including the Statement of Work and the Service Level Requirements.”

“Additional Syndromic Surveillance Dollars” means the pool of dollars available under this Agreement for Additional Work regarding Syndromic Surveillance, which Additional Work is outside of the scope of services then-described in this Agreement, including the Statement of Work and the Service Level Requirements.”

“Amendment 11 Effective Date” has the meaning specified in the Statement of Work.”

“Concurrent Users” means for each type of County User identified in the Schedule of Pricing and Payments regarding License Fees and

Maintenance Fees, the number of Users that are using the System concurrently, meaning that they are logged on to the System at the same time during the same hour.”

““DPH Programs” means the Existing DPH Programs and Additional DPH Programs.”

““eICR” means the System Software that creates and transmits the Electronic Initial Case Report, which is the HL7 message commonly known as Clinical Document Architecture, as further described in Exhibit D (Description of Software), including its Attachments.”

““ELR” means the System Software that performs the Electronic Laboratory Reporting function, as further described in Exhibit D (Description of Software), including its Attachments.”

““Existing DPH Programs” means DPH’s Acute Communicable Disease Control and Vaccine Preventable Disease Control Programs.”

““License Fees” means the License fees identified on the Schedule of Pricing and Payments, which (a) are payable to Contractor in accordance with this Agreement on an ongoing basis for the Physician Portal Application; and (b) may be payable to Contractor in accordance with this Agreement under Paragraphs 10.3.1.a. and/or 10.3.1.b.”

““Physician Portal Application” means Contractor’s Core Application commonly known as Physician Portal, as further described on Exhibit D (Description of Software), together with its Attachments.”

““Subscription Fees” means the annual subscription fees identified on the Schedule of Pricing and Payments for the Physician Portal Application which (a) are payable to Contractor in accordance with this

Agreement and (b) may be payable to Contractor in accordance with this Agreement under Paragraphs 10.3.1.a. and/or 10.3.1.b.”

““Syndromic Surveillance” means the Interface within the System Software that provides the Syndromic Surveillance function, as further described in Exhibit D (Description of Software), including its Attachments.”

““T&M Actual Amount” has the meaning specified in Paragraph 10.10 (Time and Materials Work).”

““T&M Deliverable” has the meaning specified in Paragraph 10.10 (Time and Materials Work).”

““T&M Estimate” has the meaning specified in Paragraph 10.10 (Time and Materials Work).”

““Transactions” means, with respect to the Physician Portal Application, an order request to a lab and the corresponding response from the lab. All order requests and responses may be viewed/printed an unlimited number of times without counting as an additional Transaction.”

- d. Paragraph 7.1 (Scope of Work) is deleted and replaced in its entirety as follows:

“7.1 SCOPE OF WORK

Pursuant to the terms of this Agreement, Contractor shall fully and timely provide, complete and deliver all Tasks, Subtasks, Deliverables, goods, services and other Work set forth in this Agreement, including the Statement of Work and the Service Level Requirements. Additionally, Contractor shall provide, complete and deliver all such Work in accordance with the requirements and specifications set forth in this Agreement, any applicable executed Change Order or Amendment, the

System Requirements, the other Specifications and/or the Project Charter.

7.1.1 Implementation of Upgraded System

Contractor shall provide Tasks, Subtasks and Deliverables 1-19 and 26 set forth in the Statement of Work, which include, but are not limited to, (a) expansion of the System for use by the Additional DPH Programs; (b) provision of configuration, custom development, enhancement, data conversion, data migration, testing, training, implementation and deployment services with respect to the System Software as further described in the Statement of Work; (c) development of Interfaces as further described in the Statement of Work; (d) preparation and implementation of the System Environments as further described in this Statement of Work as is necessary for the System Software (including the Work described in clauses (a) through (c)) to perform in accordance with the System Requirements and other Specifications; and (e) conversion and migration of data from County systems as further described in the Statement of Work (clauses (a) through (e) collectively, "Upgraded System"). Upon Contractor's achievement of System Acceptance for the Upgraded System, the Upgraded System shall become a part of, as applicable, System Software, System Environments, and Hosting Services and of the System as a whole for all purposes under this Agreement.

7.1.2 Maintenance Services

In exchange for County's payment of Maintenance Fees in accordance with this Agreement, Contractor shall provide maintenance

services for the System Software and the System Environment as described in, and in accordance with, the Statement of Work, the Service Level Requirements and otherwise in this Agreement ("Maintenance Services"). Maintenance Services shall commence upon the Effective Date and continue throughout the Term. County's obligation to pay Maintenance Fees in exchange for Contractor's provision of Maintenance Services is described in Paragraph 10.3 (Maintenance Fees; License and Subscription Fees; Additional Concurrent Users, Connections, or Transactions). Maintenance Services include provision of Updates and Version Releases, as more fully described in the Service Level Requirements.

7.1.3 Support Services

In exchange for County's payment of Support Fees in accordance with this Agreement, Contractor shall provide support services for the System as described in, and in accordance with, the Statement of Work, the Service Level Requirements and otherwise in this Agreement ("Support Services"). Support Services shall commence upon the Effective Date and continue throughout the Term. County's obligation to pay Support Fees in exchange for Contractor's provision of Support Services is described in Paragraph 10.4 (Support Fees). Support Services include responding to and analyzing Service Requests and correcting any and all Deficiencies in the System, as more fully described in the Service Level Requirements.

7.1.4 Hosting Services

In exchange for County's payment of the Hosting Fees in accordance with this Agreement, Contractor shall provide to County hosting services for the System as described in, and in accordance with, the Statement of Work, the Service Level Requirements and otherwise in this Agreement ("Hosting Services"). Hosting Services shall commence upon the Effective Date and continue throughout the Term. County's obligation to pay Hosting Fees in exchange for Contractor's provision of Hosting Services is described in Paragraph 10.5 (Hosting Fees). Hosting Services include any and all goods, services and other Work, including the System Environments, necessary for Contractor to host the System Software such that the System Software performs in accordance with the System Requirements and other Specifications, all as more fully described in the Service Level Requirements.

7.1.5 Additional Work

a. County Project Director may from time to time request that Contractor provide any of the following as Additional Work under this Agreement:

(1) Additional Modifications and/or Additional Interfaces for creating new functionality, and customizations, modifications and custom interfaces not then-described in this Agreement, including the Statement of Work;

(2) Software, tools and other products relating to System Software, outside of the scope of the System Requirements, as they then exist; and/or additional Concurrent Users, connections, and/or

Transactions for existing System Software; in each case, including all components and Documentation ("Additional Products");

(3) Professional Services, including consulting and training, outside of the scope of services then-described in this Agreement, including the Statement of Work and the Service Level Requirements.

All applicable Additional Work shall be priced at rates no greater than the Hourly Labor Rate and/or other applicable rates set forth on Attachment C.7 (Optional Pricing) to the Schedule of Pricing and Payments. Upon execution of a Change Order or Amendment pursuant to Paragraph 8.0 (Change Orders and Amendments) for any Additional Work, Contractor shall provide such Additional Work in accordance with the Statement of Work, the applicable Change Order or Amendment, and otherwise with this Agreement.

b. Additional Work relating to the ELR, eICR, and/or Syndromic Surveillance for each annual period of the Term following the Amendment 11 Effective Date shall utilize and be capped by the availability of Additional ELR Dollars, Additional eICR Dollars, or Additional Syndromic Surveillance, as applicable, for such annual period. For all other Additional Work for each annual period of the Term following the Amendment 11 Effective Date shall utilize and be capped by the availability of Pool Dollars for such annual period. For each annual period of the Term following the Amendment 11 Effective Date, in no event shall County be obligated to pay for Additional Work for such annual period in excess of (i) with respect to ELR, eICR, and/or Syndromic Surveillance, the then-available Additional ELR Dollars, Additional eICR Dollars, or

Additional Syndromic Surveillance Dollars, as applicable, for such annual period, and (ii) with respect to all other Additional Work, the then-available Pool Dollars for such annual period. Additionally, Contractor shall not be required to perform any Additional Work for such annual period if there are no applicable Additional ELR Dollars, Additional eICR Dollars, Additional Syndromic Surveillance Dollars, or Pool Dollars, as the case may be, available for such annual period.

c. Upon completion and delivery by Contractor, and acceptance by County, of any Additional Modifications, Additional Interfaces and/or Additional Products, such Additional Modifications, Additional Interfaces or Additional Products, as the case may be, shall become part of and be included in the System Software for all purposes under this Agreement.”

e. Paragraph 7.4 (System Acceptance) is deleted and replaced in its entirety as follows:

“7.4 DPH PROGRAM ACCEPTANCE OF UPGRADED SYSTEM; SYSTEM ACCEPTANCE OF UPGRADED SYSTEM

7.4.1 Contractor shall be obligated to complete DPH Program Acceptance of the Upgraded System as described in Task entitled “DPH Program Acceptance of the Upgraded System” of the Statement of Work for all DPH Programs on or before date which is two (2) years and nine (9) months (1,000 calendar days) following the Amendment 11 Effective Date. Such date may be extended only in accordance with Paragraph 8.3 (Amendments) and shall be extended with respect to delay to the extent resulting from (a) County delay,

provided that a Notice of Delay has been filed in accordance with Paragraph 54.0 (Notice of Delay) of Exhibit A (Additional Terms and Conditions), or (b) events described in Paragraph 16.0 (Force Majeure) of Exhibit A (Additional Terms and Conditions), or (c) as specified in the Statement of Work. The requirements for Contractor to complete DPH Program Acceptance of the Upgraded System for each DPH Program are set forth in the Statement of Work under the Task entitled “DPH Program Acceptance of the Upgraded System.” Contractor's completion of DPH Program Acceptance of the Upgraded System for each DPH Program shall be signified by County's approval in accordance with this Agreement of all Deliverables in the Statement of Work that are under the Task entitled “DPH Program Acceptance of the Upgraded System” for such DPH Program.

7.4.2 Contractor shall be obligated to achieve System Acceptance for the Upgraded System on or before the third anniversary of the Amendment 11 Effective Date. Such date may be extended only in accordance with Paragraph 8.3 (Amendments) and shall be extended with respect to delay to the extent resulting from (a) County delay, provided that a Notice of Delay has been filed in accordance with Paragraph 54.0 (Notice of Delay) of Exhibit A (Additional Terms and Conditions), or (b) events described in Paragraph 16.0 (Force Majeure) of Exhibit A (Additional Terms and Conditions) or (c) as specified in the Statement of Work.

a. The requirements for Contractor to achieve System

Acceptance of the Upgraded System are set forth in the Statement of

Work under the Task entitled "System Acceptance for Upgraded System."
Contractor's achievement of System Acceptance of the Upgraded System shall be signified by County's approval in accordance with this Agreement of all Deliverables in the Statement of Work that are under the Task entitled "System Acceptance for Upgraded System."

b. If at any time during the Acceptance Period, County Project Director makes a good faith determination that the Upgraded System has experienced an Acceptance Deficiency, County Project Director shall promptly notify Contractor in writing (which includes notification through any mechanism identified in the Service Level Requirements for initiating a Service Request) of such occurrence, describing the occurrence in reasonable detail. Contractor shall promptly commence such necessary corrections and repairs to the components of the Upgraded System to permit the Acceptance Period to restart. Contractor shall notify County Project Director in writing when such corrections and repairs have been completed. Upon County Project Director's verification of the same, the Acceptance Period shall be restarted (in this Paragraph 7.4, an "Acceptance Period Restart"). Providing sufficient time remains for Contractor to correct an Acceptance Deficiency at least ninety (90) days before the third anniversary of the Amendment 11 Effective Date, the System Acceptance process shall continue. The correction and repair and Acceptance Period Restart processes described in this Paragraph 7.4.2 shall additionally apply in the event that Contractor otherwise discovers that an Acceptance Deficiency has occurred.

c. If, following an Acceptance Period Restart, sufficient time does not remain for Contractor to correct an Acceptance Deficiency at least ninety days (90) days before the third anniversary of the Amendment 11 Effective Date, County Project Director shall promptly notify Contractor in writing of County's election to either: (a) permit Contractor to repeat the correction and repair process described in Paragraph 7.4.2.b above; (b) require Contractor, at Contractor's expense and upon County's return of the affected components of the Upgraded System, (i) to replace the affected components of the Upgraded System with another Contractor and/or third-party product that satisfies the System Requirements and other Specifications and (ii) to make all modifications to the remaining components of the Upgraded System as is necessary for such Contractor or third-party product to be compatible with the remaining components of the Upgraded System; or, if, in County's sole but reasonable discretion, neither subsection (a) or (b) will provide the County with an Upgraded System that performs as described in the Statement of Work under the Task entitled "System Acceptance," (c) terminate this Agreement with respect to the Upgraded System and impose the applicable liquidated damages specified in Paragraph 12.4 (Liquidated Damages). Upon approval by County in accordance with this Agreement, each such Contractor and/or third-party product shall constitute the applicable System Software comprising part of the System for all purposes under this Agreement. If Contractor fails to replace an affected component of the Upgraded System as provided in this Paragraph 7.4.2.c within sixty (60) calendar days of County's initiation of

such remedy under this Paragraph 7.4.2.c (as such period may be extended, in writing, by County Project Director), then County may terminate this Agreement and impose the applicable liquidated damages specified in Paragraph 12.4 (Liquidated Damages).”

f. Paragraph 8.2 (Change Orders) is deleted and replaced in its entirety as follows:

“8.2 CHANGE ORDERS

8.2.1 Without limiting Paragraph 8.3 (Amendments), for any change which does not affect the scope of Work, Term, Maximum Contract Sum, payments or any term or condition of this Agreement, including the Exhibits and Attachments, a "Change Order" shall be prepared and executed by County Project Director and an authorized representative of Contractor as set forth in Attachment A.2 (Contractor's Administration), subject in all cases to the availability of funding.

8.2.2 Such changes include changes which require Additional Work; provided that any such Change Order (a) uses then-available Additional ELR Dollars, Additional eICR Dollars, Additional Syndromic Surveillance Dollars, or Pool Dollars, as applicable, (b) includes all information required under the Statement of Work, (c) does not require amending any term or condition of this Agreement, including any Exhibit or Attachment, and (d) has the written concurrence of DPH's Chief Information Officer or such person's designee. The Parties agree that prior to executing any proposed Change Order for Additional Work, the Parties shall jointly verify whether Additional ELR Dollars, Additional eICR Dollars, Additional Syndromic Surveillance Dollars, or Pool Dollars, as applicable, are available for such proposed Change Order by reviewing

the aggregate amount of Additional ELR Dollars, Additional eICR Dollars, Additional Syndromic Surveillance Dollars, or Pool Dollars, as applicable, that has been allocated to Change Orders and Amendments prior to the date of the proposed Change Order.

8.2.3 Change Orders shall take effect, and be binding upon the Parties, only if and upon execution by the authorized representatives of each of the Parties, as specified in this Paragraph 8.2.”

g. Paragraph 8.3 (Amendments) is deleted and replaced in its entirety as follows:

“8.3 AMENDMENTS

For any change which affects the scope of Work, Term, Maximum Contract Sum, payments or any term or condition of this Agreement, an Amendment shall be authorized by the Board of Supervisors and executed by an authorized representative of County and an authorized representative of Contractor as set forth on Attachment A.2 (Contractor's Administration), subject in all cases to the availability of funding.

Notwithstanding the foregoing, the Director may execute Amendments on behalf of County under this Paragraph 8.3 without further action required on the part of the Board of Supervisors, which do any of the following, subject in all cases to the availability of funding:

8.3.1 Increase the Maximum Contract Sum up to in aggregate ten percent (10%) of the Maximum Contract Sum; provided that such Amendment has approval as to form by County Counsel.

8.3.2 Intentionally Omitted.

8.3.3 Move dollar amounts allocated within the Maximum

Contract Sum to other areas within the Maximum Contract Sum (e.g.,

available Additional ELR Dollars, Available eICR Dollars, Additional or Pool Dollars among each other; Available Additional ELR Dollars, Additional eICR Dollars, Additional Syndromic Surveillance Dollars, and Pool Dollars among annual periods of the Term; allocated payments among Deliverables; etc.); provided that such Amendment shall have approval as to form by County Counsel.

8.3.4 Extend the dates set forth in Paragraph 7.4 (DPH Program Acceptance of Upgraded System; System Acceptance of Upgraded System); provided that such Amendment (a) shall not extend the Term and (b) shall have written concurrence of DPH's Chief Information Officer and CIO and approval as to form by County Counsel.

8.3.5 Update the Exhibits and/or Attachments during implementation as is necessary to accurately reflect the as-built Upgraded System or any phasing of implementation of the Upgraded System; provided that such Amendment shall have approval as to form by County Counsel.

8.3.6 Engage Contractor to provide Additional Work under Paragraph 7.1.5 (Additional Work) that requires amending any term or condition of the Agreement, including any Exhibit or Attachment; provided that any such Amendment (a) uses then-available Additional ELR Dollars, Additional eICR Dollars, Additional Syndromic Surveillance Dollars, or Pool Dollars, as applicable, (b) includes all information required under the Statement of Work, and (c) has written concurrence of DPH's Chief Information Officer and CIO and approval as to form by County Counsel.

The Parties agree that prior to executing any proposed Amendment under

this Paragraph 8.3.6, the Parties shall jointly verify whether Additional ELR Dollars, Additional eICR Dollars, Additional Syndromic Surveillance Dollars, or Pool Dollars, as applicable, are available for such proposed Amendment by reviewing the aggregate amount of Additional ELR Dollars, Additional eICR Dollars, Additional Syndromic Surveillance Dollars, or Pool Dollars, as applicable, that has been allocated to Change Orders and Amendments prior to the date of the proposed Amendment.

8.3.7 Implement an increase in Maintenance Fees, License Fees, and/or Subscription Fees as contemplated under the Schedule of Pricing and Payments and Paragraph 10.3 (Maintenance Fees; License and Subscription Fees; Additional Concurrent Users or Transactions); provided that such Amendment has approval as to form by County Counsel.

8.3.8 Implement reductions under Paragraph 11.0 (County's Obligation for Future Fiscal Years; Budget Reductions); provided that such Amendment has written concurrence of DPH's Chief Information Officer and CIO and approval as to form by County Counsel.

8.3.9 Consent to an assignment or delegation under Paragraph 38.0 (Assignment by Contractor) of Exhibit A (Additional Terms and Conditions); provided that such Amendment has approval as to form by County Counsel.

The Board of Supervisors or County's Chief Executive Officer, or designee, may require the addition and/or change of certain terms and conditions in the Agreement during the Term. County reserves the right to add and/or change such provisions as may be required by County's

Board of Supervisors or Chief Executive Officer. To implement such changes, an Amendment to the Agreement shall be prepared and executed by the Director and an authorized representative of Contractor as set forth on Attachment A.2 (Contractor's Administration).

Amendments shall take effect, and be binding upon the Parties, only if and upon execution by the authorized representatives of each of the Parties, as specified in this Paragraph 8.3.”

h. Paragraph 8.4 (Extensions of Time) is deleted and replaced in its entirety as follows:

“8.4 EXTENSIONS OF TIME

8.4.1 The Project Charter developed and maintained by Contractor under the Statement of Work includes, among other things, a schedule for Contractor's completion of all Work associated with implementation of the Upgraded System. Changes to the Project Charter that extend the dates set forth in Paragraph 7.4 (DPH Program Acceptance of Upgraded System; System Acceptance of Upgraded System) shall be made only in accordance with Paragraph 8.3 (Amendments). All other changes to the Project Charter shall be made in accordance with the process outlined in the Statement of Work.

8.4.2 Each Change Order and Amendment for Additional Work shall include, among other things, a project schedule for completion of the Additional Work thereunder. County Project Director may grant written extensions of time for Contractor's performance of such Additional Work which shall not be unreasonably withheld, provided that such extensions shall not extend the Term.

8.4.3 If Contractor is able to demonstrate that County delay will cause Contractor to fail to meet any deadline for performance of any obligation provided hereunder (other than the dates set forth in Paragraph 7.4 (DPH Program Acceptance of Upgraded System; System Acceptance of Upgraded System), which shall be addressed only as provided in Paragraph 7.4), then County Project Director shall grant Contractor a written extension of time for Contractor's performance commensurate with the County delay, provided that such extension shall not extend the Term.”

- i. Paragraph 9.1 (Definition of Term) is deleted and replaced in its entirety as follows:

"9.1 DEFINITION OF TERM

The term of this Agreement shall commence upon the Effective Date and shall continue until May 9, 2026, unless terminated earlier in whole or in part, as provided in this Agreement (“Term”).”

- j. Paragraph 10.1 (General) is deleted and replaced in its entirety as follows:

“10.1 GENERAL

The Schedule of Pricing and Payments sets forth all fees and rates that may be applicable to this Agreement during the Term, including (a) a payment schedule for all Tasks and Deliverables necessary for Contractor to achieve System Acceptance for the Upgraded System; as well as other Tasks and Deliverables enumerated in the Statement of Work regarding reports, Baseline Interfaces with the State of California’s CalREDIE system and County’s ORCHID system, and Contractor’s Core Applications commonly known as Physician Portal and Electronic Health

Record Gateway; (b) the aggregate License Fees, Maintenance Fees, Support Fees, and Hosting Fees for the Term; and (c) the Hourly Labor Rate for Additional Work.”

k. Paragraph 10.2 (Maximum Contract Sum) is deleted and replaced in its entirety as follows:

“10.2 MAXIMUM CONTRACT SUM

10.2.1 Subject to Paragraph 7.0 (Work and System Acceptance), the "Maximum Contract Sum" under this Agreement for the Term, including Additional ELR Dollars, Additional eICR Dollars, Additional Syndromic Surveillance Dollars, Pool Dollars, and all applicable Taxes, shall not exceed the amount indicated in the Schedule of Pricing and Payments, which amount is allocated as set forth on the Schedule of Pricing and Payments, unless the Maximum Contract Sum is modified pursuant to an Amendment under and in accordance with Paragraph 8.0 (Change Orders and Amendments). The Maximum Contract Sum is the maximum monetary amount that may be payable by County to Contractor for supplying all the Tasks, Subtasks, Deliverables, goods, services and other Work specified under this Agreement during the Term. Contractor shall perform and complete all Work required of Contractor by this Agreement during the Term in exchange for the amounts to be paid to Contractor as set forth in the Schedule of Pricing and Payments, but in any event, not in excess of the Maximum Contract Sum.

10.2.2 Notwithstanding any of the foregoing, it is understood and agreed that Contractor shall not provide any Additional Work unless and until the applicable of a Change Order or Amendment has been executed

in accordance with Paragraph 8.0 (Change Orders and Amendments) with respect to such Additional Work.”

I. Paragraph 10.3 (Maintenance Fees) is deleted and replaced in its entirety as follows:

“10.3 MAINTENANCE FEES; LICENSE AND SUBSCRIPTION FEES; ADDITIONAL CONCURRENT USERS, CONNECTIONS, OR TRANSACTIONS

10.3.1 The Schedule of Pricing and Payments includes the aggregate Maintenance Fees payable by County during the Term for Contractor's provision of Maintenance Services as described in Paragraph 7.1.2 (Maintenance Services). Where indicated on the Schedule of Pricing and Payments for a specified module of the System Software, the aggregate Maintenance Fees are for up to the identified number of Concurrent Users or connections, as such number may be adjusted pursuant to this Paragraph 10.3.1. The Maintenance Fees are payable on a quarterly basis in arrears commencing with the first quarter following the Effective Date. The Schedule of Pricing and Payments also includes the aggregate ongoing License Fees and Subscription Fees payable by County during the Term following the Amendment 11 Effective Date for the Physician Portal Application, which in the case of Subscription Fees is limited to the number of monthly Transactions indicated in the Schedule of Pricing and Payments, as such number may be adjusted pursuant to this Paragraph 10.3.1. The ongoing License Fees and Subscription Fees are payable on a quarterly basis in arrears

commencing with the first quarter identified in the Schedule of Pricing and Payments.

a. Prior to each anniversary of the Amendment 11 Effective Date, the Parties shall determine whether at any point during the then-current annual period of the Term, County's Concurrent Users or connections for any applicable module of the System Software exceeded the Concurrent User or connection limit, as the case may be, for such module set forth in the Schedule of Pricing and Payments, for either (i) more than thirty (30) consecutive calendar days during such annual period, or (ii) any amount of time during two (2) or more calendar months during such annual period. Additionally, the Parties shall determine whether during any calendar month during the then-current annual period of the Term, County's Transactions for the Physician Portal Application exceeded the monthly Transaction limit set forth in the Schedule of Pricing and Payments.

(i) In the case of Concurrent Users and connections, County shall owe Contractor for the one-time License Fees associated with the applicable block of additional Concurrent Users or connections, as the case may be, as shown on the Schedule of Pricing and Payments, and for the pro rata portion of the Maintenance Fees associated with such applicable block of additional Concurrent Users or connections, as the case may be, for the specific amount of time during which County exceeded such Concurrent User or connection limit, as the case may be. The License Fees shall be a one-time fee for the License described in Paragraph 13.0 (Ownership and License), and County shall owe no

further License fees for the block of additional Concurrent Users and connections acquired under this Paragraph 10.3.1.a, even if County determines under Paragraph 10.3.1.b to discontinue paying Maintenance Fees at any point for such block of additional Concurrent Users or connections.

(ii) In the case of Transactions, County shall owe Contractor the Subscription Fees associated with the applicable block of additional Transactions as shown on the Schedule of Pricing and Payments for each calendar month during which County exceeded such Transaction limit.

(iii) Contractor shall invoice County for amounts due under this Paragraph 10.3.1.a when Contractor invoices County for the next installment of ongoing License Fees, Subscription Fees, Maintenance Fees, Support Fees, and Hosting Fees under and in accordance with this Agreement.

b. Additionally, prior to each anniversary of the Amendment 11 Effective Date, County shall set its Concurrent User and connection limits for purposes of Maintenance Fees and Transaction limits for purposes of Subscription Fees for the next annual period of the Term, which limits may, but are not required to, include any block of additional Concurrent Users, connections, or Transactions acquired under Paragraph 10.3.1.a. In the event County elects to increase or decrease its Concurrent User, connection, or Transaction limits for any annual period of the Term, the Parties shall enter into an Amendment in accordance with this Agreement showing the applicable Maintenance

Fees and/or Subscription Fees for such annual period on the Schedule of Pricing and Payments. It is understood and agreed that County cannot decrease its Concurrent User, connection, or Transaction limits below the initial Concurrent User, connection, and Transaction limits shown on the Schedule of Pricing and Payments, but rather can only elect to decrease its Concurrent User, connection, or Transaction limits to remove any block of additional Concurrent Users, connections, or Transactions the County has previously elected to include under this Paragraph 10.3.1.b.

10.3.2 The Maintenance Fees, ongoing License Fees, and Subscription Fees shall remain firm and fixed, and shall not increase, during the Term following the Amendment 11 Effective Date, except as expressly provided in Paragraph 10.3.1 above and/or in the Schedule of Pricing and Payments.”

m. Paragraph 10.4 (Support Fees) is deleted and replaced in its entirety as follows:

“10.4 SUPPORT FEES

The Schedule of Pricing and Payments includes the aggregate Support Fees payable by County during the Term for Contractor's provision of Support Services as described in Paragraph 7.1.3 (Support Services). The Support Fees are payable on a quarterly basis in arrears commencing with the first quarter following the Effective Date. The Support Fees shall remain firm and fixed, and shall not increase, during the Term following the Amendment 11 Effective Date as shown on the Schedule of Pricing and Payments.”

n. Paragraph 10.5 (Hosting Fees) is deleted and replaced in its entirety as follows:

“10.5 HOSTING FEES

The Schedule of Pricing and Payments includes the aggregate Hosting Fees payable by County during the Term, as provided under Paragraph 7.1.4 (Hosting Services). The Hosting Fees are payable on a quarterly basis in arrears commencing with the first quarter following the Effective Date. The Hosting Fees shall remain firm and fixed, and shall not increase, during the Term following the Amendment 11 Effective Date as shown on the Schedule of Pricing and Payments.”

- o. Paragraph 10.6 (Pool Dollars) is deleted and replaced in its entirety as follows:

“10.6 ADDITIONAL ELR DOLLARS, ADDITIONAL EICR DOLLARS, ADDITIONAL SYNDROMIC SURVEILLANCE DOLLARS, AND POOL DOLLARS”

The Schedule of Pricing and Payments includes the Additional ELR Dollars, Additional eICR Dollars, and Additional Syndromic Surveillance Dollars available under this Agreement for each annual period during the of the Term following the Amendment 11 Effective Date that are available for Additional Work pertaining to ELR, eICR, or Syndromic Surveillance, as the case may be, under Paragraph 7.1.5 (Additional Work).

Additionally, the Schedule of Pricing and Payments includes the pool of dollars available under this Agreement for each annual period during the Term of this Agreement following the Amendment 11 Effective Date (for each annual period, "Pool Dollars") for the purchase of Additional Work under Paragraph 7.1.5 (Additional Work). The total amount of available Additional ELR Dollars, Additional eICR Dollars, Additional Syndromic Surveillance Dollars, or Pool Dollars, as applicable, for an annual period shall be decreased by each applicable Change Order and Amendment

executed under this Agreement with respect to such annual period, and may only be increased by executing an Amendment in accordance with Paragraph 8.0 (Change Orders and Amendments).”

p. Paragraph 10.8 (Cost of Living Adjustments) is deleted and replaced in its entirety as follows:

“10.8 INTENTIONALLY OMITTED”

q. Paragraph 10.10 (Time and Materials Work) is added to Paragraph 10.0 (Prices and Fees) in the proper numerical order as follows:

"10.10 TIME AND MATERIALS WORK

10.10.1 The dollar amounts set forth on the Schedule of Pricing and Payments for Deliverables under Tasks 21 (Reports for Upgraded System), 23 (ORCHID Baseline Interface for Upgraded System), and 26 (User Defined Forms for Upgraded System) of the Statement of Work as of the Amendment 11 Effective Date are not-to-exceed amounts for such Deliverables, meaning that Contractor shall perform all Work required to complete and deliver each such Deliverable for an amount not-to-exceed the amounts set forth on the Schedule of Pricing and Payments as of the Amendment 11 Effective Date for such Deliverable, but that Contractor shall only be paid an amount for such Deliverable as determined in accordance with this Paragraph 10.10. Such Deliverables are referred to herein as “T&M Deliverables.” Notwithstanding anything to the contrary in this Paragraph 10.10, regarding Deliverables

under Task 21 (Reports for the Upgraded System), while it is anticipated that the not-to-exceed amounts included for these Deliverables will be sufficient to pay for all Work required for Contractor to complete and deliver five (5) reports per DPH Program, once the System Requirements and Specifications for these reports are finalized it may be that such amounts are sufficient to pay for more or less than (5) reports. The Parties agree that such Work shall only include the number of reports as agreed to by the Parties in the final System Requirements and Specifications for such reports for which such amounts are sufficient to pay.

10.10.2 Prior to commencing Work on a T&M Deliverable, Contractor shall submit to County Project Director and Project Manager in writing Contractor's estimated level of effort required to complete and deliver all Work required for such T&M Deliverable as determined under Paragraph 10.10.1, which amount shall not exceed the not-to-exceed amount set forth on the Schedule of Pricing and Payments for such T&M Deliverable as of the Amendment 11 Effective Date. This estimated level of effort shall be calculated using an hourly rate that is no greater than the Hourly Labor Rate, and shall be broken down to include all categories of Work required to complete such T&M Deliverable (e.g., personnel hours, cost of goods, etc.).

Each estimated level of effort is referred to herein as the “T&M Estimate.” Each T&M Estimate shall require written approval of County Project Director prior to Contractor commencing Work on the applicable T&M Deliverable.

10.10.3 At the time when Contractor submits the Deliverable Acceptance Form for a T&M Deliverable under Paragraph 7.2 (Approval of Work) of this Agreement, Contractor shall additionally submit in writing Contractor’s actual level of effort expended to complete and deliver all Work required for such T&M Deliverable, and shall include supporting documentation. Each actual level of effort shall be broken down to include all categories of Work actually required to complete such T&M Deliverable (e.g., personnel hours actually spent, cost of goods actually sold or licensed, etc.) and shall show the difference between the T&M Estimate for such T&M Deliverable by category. Each actual level of effort is referred to herein as the “T&M Actual Amount.” Each T&M Actual Amount and supporting documentation shall require County Project Director’s written approval, as evidenced by County Project Director’s countersignature on the applicable Deliverable Acceptance Form. In no event shall the T&M Actual Amount exceed the not-to-exceed amount actual amount Contractor ultimately invoices for the T&M Deliverable in accordance with this Agreement exceed the T&M Actual Amount for such T&M

Deliverable. Without limiting the County's ability to otherwise submit an IDR with respect to an invoice that includes payment for a T&M Deliverable, if County identifies any discrepancies in the T&M Actual Amount, County and Contractor shall follow the process outlined in Paragraph 12.6 (Invoice Discrepancy Report) with respect thereto."

r. Paragraph 12.2 (Submission of Invoices) is deleted and replaced in its entirety as follows:

"12.2 SUBMISSION OF INVOICES

Upon County's written approval thereof in accordance with the applicable provisions of Paragraph 7.0 (Work and System Acceptance), Contractor shall invoice County for applicable Deliverables under the Statement of Work in the amounts specified for such Deliverables in the Schedule of Pricing and Payments. Contractor shall invoice County for ongoing License Fees, Subscription Fees, Maintenance Fees, Support Fees, and Hosting Fees quarterly, in arrears. Upon County's written approval thereof in accordance with the applicable provisions of Paragraph 7.0 (Work and System Acceptance), Contractor shall invoice County for Additional Work specified in, and in accordance with, any Change Order or Amendment.

Contractor shall mail an original and shall submit one (1) copy by mail, facsimile or electronic mail transmission of the invoice for payment for services to the following addresses:

ORIGINAL:

County Project Director at the address indicated on Attachment A.1 (County's Administration) to Exhibit A (Additional Terms and Conditions).

COPY:

County's Grant Administrator at the address indicated on Attachment A.1 (County's Administration) to Exhibit A (Additional Terms and Conditions)”

- s. Paragraph 12.3 (Invoice Detail) is deleted and replaced in its entirety as follows:

“12.3 INVOICE DETAIL

Each invoice submitted by Contractor shall include:

12.3.1 For each Deliverable under Tasks 1-26 of the Statement of Work, (a) a copy of the applicable fully executed Deliverable Acceptance form; (b) if applicable, a copy of the T&M Actual Amount and supporting documentation; and (c) any additional supporting documentation reasonably requested by County Project Director;

12.3.2 For ongoing License Fees, Subscription Fees, Maintenance Fees, Support Fees and Hosting Fees, the amount of payment therefor. If the invoice includes amounts owing under Paragraph 10.3.1.a, additionally include supporting documentation for such amounts;

12.3.3 For Additional Work: (a) the date of the applicable executed Change Order or Amendment; (b) a copy of the applicable fully executed Deliverable Acceptance Form; (c) any additional supporting documentation reasonably requested by County Project Director; and (e) the amount of payment therefor (reference the Task in the Statement of Work entitled “Provide As-Needed Additional Work Task” for the fixed

price payment schedule unless otherwise agreed to in applicable Change Order or Amendment);

12.3.4 If applicable, the cumulative amount of Additional ELR Dollars, Additional eICR Dollars, Additional Syndromic Surveillance Dollars, or Pool Dollars, as the case may be, charged to County to date during the applicable annual period of the Term and the remaining Additional ELR Dollars, Additional eICR Dollars, Additional Syndromic Surveillance Dollars, or Pool Dollars, as the case may be, available for use in connection with this Agreement generally for such annual period of the Term;

12.3.5 To the best of Contractor's knowledge, an indication of any liquidated damages, credits or withholds accrued under this Agreement; and

12.3.6 Any other supporting documentation reasonably requested by County Project Director.”

t. Subparagraph 13.2.1 of Paragraph 13.2 (Scope of License) is deleted and replaced in its entirety as follows:

“13.2.1 To use, operate and execute the System Software for County's governmental purposes on an unlimited number of computers, servers, local area networks and wide area networks for use by an unlimited number of Users, except that with respect to specified modules Users shall be limited to the number of Concurrent Users described in Paragraph 10.3.1 (Maintenance Fees; License and Subscription Fees; Additional Concurrent Users or Transactions);”

9. Amendments to Exhibit A (Additional Terms and Conditions). As of the Amendment 11 Effective Date, Exhibit A (Additional Terms and Conditions) is amended as follows:

a. Paragraph 3.0 (Confidentiality and Security) is amended to add the following paragraph in the proper numerical order:

“3.8 Without limiting this Paragraph 3.0, Contractor, its officers, employees, subcontractors, agents, and the System, as applicable, shall at all times comply with Exhibit Q (Information Security Requirements) and its Attachments, as Contractor’s responses thereto are updated from time to time in accordance with this Agreement.”

b. Paragraph 8.1 (Remedies) is amended to delete and replace Subparagraph 8.1.4(a) thereof as follows:

“(a) Contractor shall promptly return to County any and all of County’s Confidential Information that relates to that portion of the Agreement or Work terminated, including all County records, data and other information, including records, data and other information pertaining to County’s constituents, in media requested by County. In doing so, Contractor shall remove all copies of such Confidential Information from its media, and otherwise destroy all retained hard copies of such Confidential Information, in each case, in accordance with Paragraphs 3.8 and 11.11;”

10. Amendments to Other Exhibits and Attachments.

a. Exhibit B (Statement of Work) is deleted and replaced in its entirety with Exhibit B (Statement of Work), together with Attachment B.1 (Additional DPH Programs) and B.2

(Deliverable Expectation Document) thereto, attached to this Amendment 11 and incorporated by this reference.

b. Exhibit C (Schedule of Pricing and Payments), together with Attachments C.1 (Maintenance Fees Detail), C.2 (Support Fees Detail), C.3 (Hosting Fees Detail), C.4 (Pool Dollars & Additional Work Pricing), C.5 (Credit Detail), C.6 (Prior Change Order Detail), and C.7 (GSA Schedule) thereto, is deleted and replaced in its entirety with Exhibit C (Schedule of Pricing and Payments), together with Attachments C.1 (Term Year 1-7 Amounts), C.2 (Tasks and Deliverables Detail), C.3 (Maintenance Fees Detail), C.4 (Support Fees Detail), C.5 (Hosting Fees Detail), C.6 (Additional Work Dollars Detail), and C.7 (Optional Pricing) attached to this Amendment 11 and incorporated by this reference.

c. Exhibit D (Description of Software), together with Attachments D.1 (Web vCMR 8 Series Summary of Functions) and D.2 (System Definitions) thereto, is deleted and replaced in its entirety with Exhibit D (Description of Software), together with Attachments D.1 (System Requirements for Upgraded System), D.2 (System Definitions), D.3 (List of Reports), D.4 (List of Dashboards), D.5 (Baseline Interface Requirements), D.6 (List of Other Baseline Modifications for Upgraded System), D.7 (Design Specifications for CalREDIE Interface), D.7.1 (Screenshots of CalREDIE Data Fields), D.8 (Design Specifications for ORCHID Interface), D.8.1 (ORCHID List of Data Fields), and D.9 (List of User Defined Forms), attached to this Amendment 11 and incorporated by this reference.

d. Exhibit E (Minimum System Requirements) is deleted and replaced in its entirety with Exhibit E (Minimum System Requirements) attached to this Amendment 11 and incorporated by this reference.

e. Exhibit F (Service Level Requirements), together with Attachment F.1 (Guide to Customer Support Services), F.2 (Electronic Lab Reporting (ELR) Maintenance and Support Guide), and F.3 (Disaster Recovery Service Level Requirements), is deleted and replaced in its

entirety with Exhibit F (Service Level Requirements), together with Attachment F.1 (Guide to Customer Support Services), F.2 (Electronic Lab Reporting (ELR) Maintenance and Support Guide), and F.3 (Disaster Recovery Plan), attached to this Amendment 11 and incorporated by this reference.

f. Exhibit Q (Information Security Requirements), together with Attachments Q.1 (Authentication Requirements), Q.2 (Application Security Requirements), and Q.3 (SaaS Vendor Security and Privacy Assessment), attached to this Amendment 11 and incorporated by this reference, is added to the Agreement.

11. Authorization Warranty. Contractor and the person executing this Amendment 11 on behalf of Contractor represent and warrant that the person executing the Amendment 11 for Contractor is an authorized agent who has actual authority to bind Contractor to each and every term, condition, and obligation of the Amendment 11 and that all requirements of Contractor have been fulfilled to provide such actual authority.

12. Counterparts. This Amendment 11 may be executed in any number of facsimile or other electronic counterparts, all of which when taken together shall constitute one in the same instrument.

13. Effect on Agreement. Except for the changes set forth in this Amendment 11, the Agreement shall not be changed in any other respect and shall remain in full force and effect.

[signature page follows]

IN WITNESS WHEREOF, the Board of Supervisors of the County of Los Angeles has caused this Amendment 11 to be subscribed on behalf of the County of Los Angeles by its Director of its Department of Public Health; and Contractor has caused this Amendment 11 to be subscribed on its behalf by its duly authorized officer, as of the day, month, and year first above written.

COUNTY OF LOS ANGELES

By: _____
Barbara Ferrer, Ph.D., M.P.H., M.Ed.
Director

ATLAS DATABASE SOFTWARE CORPORATION
d/b/a ATLAS DEVELOPMENT CORPORATION

By: _____
Printed Name: _____
Title: _____

APPROVED AS TO FORM BY THE OFFICE
OF THE COUNTY COUNSEL:
MARY C. WICKHAM, County Counsel

By: _____
Michael Owens
Deputy County Counsel

APPROVED AS TO CONTRACT
ADMINISTRATION:

By: _____
Patricia Gibson, Chief
Contracts and Grants Division

BL#04222

EXHIBIT B

STATEMENT OF WORK ENTERPRISE SYSTEM EXPANSION

I. INTRODUCTION

This Exhibit B (Statement of Work) (together with all Attachments hereto, "Statement of Work") defines the scope of the Work to be performed under that certain Software and Services Agreement, County Agreement No. PH-001629, dated as of May 10, 2011 (together with all Exhibits and Attachments, all as amended in accordance with the terms thereof, the "Agreement"), by and between the County of Los Angeles, for its Department of Public Health ("County"), and Atlas Database Software Corp. d/b/a Atlas Development Corporation ("Contractor"), specifically under Amendment Number 11 dated _____, 2018 ("Amendment 11 Effective Date"), to the Agreement. This Work includes, but is not limited to, (a) expansion of the System for use by the additional DPH programs identified on Attachment B-1 (Additional DPH Programs) ("Additional DPH Programs"); (b) provision of configuration, custom development, enhancement, data conversion, data migration, testing, training, implementation and deployment services with respect to the System Software for all DPH Programs as further described in this Statement of Work; (c) development of Interfaces as further described in this Statement of Work; (d) preparation and implementation of the System Environments as further described in this Statement of Work as is necessary for the System Software (including the Work described in clauses (a) through (c)) to perform in accordance with the System Requirements and other Specifications; (e) conversion and migration of data from County systems as further described in this Statement of Work (clauses (a) through (e) collectively, "Upgraded System"); and (e) continued provision of Additional Work, Maintenance Services, Support Services, and Hosting Services as further described in this Statement of Work. Capitalized terms used in this Statement of Work without definition have the meanings given to such terms in the Agreement.

II. INSTRUCTION

Contractor shall provide Deliverables to County as follows:

- A. All status reports and other Deliverable documents in electronic format in a file format reasonably acceptable to County. County agrees that PDF and Microsoft Office file formats including Microsoft Word and Microsoft Project formats are acceptable file formats.
- B. Access to the System Software electronically over the Internet as part of the Hosting Services described in Task 29 (Provide Hosting Services).
- C. All Documentation available for download through a secure website or electronically in a file format reasonably acceptable to County. County agrees that PDF and Microsoft Office file formats including Microsoft Word and Microsoft Project formats are acceptable file formats.

- D. All Deliverables must be developed in the form and format agreed to by County and Contractor. Work on Deliverables identified as “KEY” (“Key Deliverables”) will follow a Deliverable Expectation Document (also referred to as a “DED”), a template for which is attached to this Statement of Work as Attachment B.2 (Deliverable Expectation Document). The DED will set forth, among other things, acceptance criteria for the Key Deliverable, which will include but not be limited to Deliverable descriptions and acceptance criteria set forth in this Statement of Work. No Work will be performed on any Key Deliverable until the DED has been approved by County. The DEDs for Key Deliverables will be prepared by the Contractor and, if requested by County, will require a review meeting between County and Contractor prior to approval. County may authorize Contractor during the implementation process (to be documented in the Project Charter) to include acceptance criteria for two or more Key Deliverables into one DED where Key Deliverables relate to the same Task and/or DPH Program, or as otherwise authorized by County. As each Key Deliverable is submitted, the Contractor must include a copy of the applicable DED as the cover sheet. If requested by County, the approval of the completed Key Deliverable will require a meeting between County and Contractor. Approval of Key Deliverables shall be in accordance with Paragraph 7.2 (Approval of Work) of the Base Agreement.
- E. All Project Charter updates shall be provided using County Project Management standards. All such updates and all training materials shall be provided in a hard copy format if requested by County or electronically in a file format reasonably acceptable to County. County agrees that PDF and Microsoft Office file formats including Microsoft Word and Microsoft Project formats are acceptable file formats.
- F. Unless otherwise specified in this Statement of Work, all Deliverables shall be fully completed and delivered to County for review by the date set forth in the Project Charter. All Deliverables require approval by County in accordance with Paragraph 7.2 (Approval of Work) of the Base Agreement.
- G. Designated Contractor project staff (see Subtasks 1.1 (Plan and Deliver Kick-Off Meeting) and 2.2 (Prepare Steering Committee Reports and Conduct Steering Committee Meetings)) must attend the Kick-Off Meeting and all steering committee meetings in person. Unless otherwise specified herein, other status meetings may be held in person or by conference call via a Contractor-provided, County-approved method such as WebEx or Skype. All meeting materials are to be provided by Contractor a minimum of 24 hours in advance of the meeting.
- H. County reserves the right:
 - I. To order the Work under Tasks 1 through 26 in phases, including one or more applicable DPH Programs in each phase, and to issue notices to proceed with respect to each phase concurrently, sequentially, or in any order. If County determines to order the work in phases, each phase will include its own set of applicable Tasks, Subtasks, and Deliverables under Tasks 1 through 26. The phases will be identified in the Project Charter. Once the phases have been approved by County, if necessary, the Parties will enter into an Amendment in accordance with the Agreement that will

restate Attachment C.2 (Task and Deliverable Detail) to Exhibit C (Schedule of Pricing and Payments) to allocate the payments indicated on such Attachment C.2 for Tasks 1 through 26 among the applicable Deliverables in each phase. Contractor shall not commence Work with respect to any phase until County has issued a notice to proceed for such phase.

- II. To add additional DPH programs for implementation under Tasks 1 through 26 at any time following the Amendment 11 Effective Date through an Amendment for Additional Work, which Amendment will include any revisions necessary to the Agreement and/or any of its Exhibits or Attachments required to reflect the addition of such DPH programs.
- III. To move all or any portion of Tasks 21-25 to occur prior to System Acceptance of the Upgraded System (Task 19 (System Acceptance of Upgraded System)). In such case, if necessary, the Parties will enter into an Amendment in accordance with the Agreement adjusting the required dates for the applicable of DPH Program Acceptance of the Upgraded System (Task 18) and/or System Acceptance of the Upgraded System, and making any other required amendments. For the avoidance of doubt, though ordered numerically after Task 19 (System Acceptance of Upgraded System), it is anticipated that completion of all Work under Task 26 (User Defined Forms for Upgraded System) will occur prior to Task 19 (System Acceptance of Upgraded System), unless otherwise agreed to by County and reflected in the Project Charter.

III. TASKS AND DELIVERABLES

TASK 1 - PROJECT INITIATION

Contractor shall provide project management and administration for the Work and the Upgraded System to be provided by Contractor under the Agreement as provided in this Task 1 (Project Initiation) below. Unless otherwise specified herein or agreed to by the Parties, Contractor shall utilize its standard practices and procedures in the performance of all project management and administration tasks.

Contractor will not be responsible for the performance of County personnel. However, Contractor shall coordinate with County Project Director to help ensure that all input required by County personnel is provided in accordance with the Project Charter in order for Contractor to complete all Tasks, Subtasks, Deliverables, goods, services, and other Work as required by the Agreement.

Subtask 1.1 - Plan and Deliver Kick-Off Meeting

Contractor shall conduct the Kick-Off Meeting in person at a location approved by County within 30 calendar days of the Amendment 11 Effective Date to provide an introduction to County Executive Leadership of the Work described in this Statement of Work, including timelines, dependencies and nature of the work effort that will be required to implement the Work.

Prior to the Kick-Off Meeting, Contractor shall work with County:

COUNTY OF LOS ANGELES
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EXHIBIT B (STATEMENT OF WORK)

- A. To identify all Contractor and County resources required to complete the tasks outlined in this Statement of Work; and
- B. To develop an agenda/schedule for the Project Initiation; and
- C. To Develop a list of attendees for the Kick-Off Meeting.

Deliverable 1.1 – Kick-Off Meeting (KEY)

Contractor shall prepare the Kick-Off Meeting materials, conduct the Kick-Off Meeting in person, list the members who attended the Kick-Off Meeting, and prepare report summarizing Kick-Off Meeting, all as described in Subtask 1.1 (Plan and Deliver Kick-Off Meeting), within 30 calendar days of the Amendment 11 Effective Date.

Subtask 1.2 – Develop and Present Project Charter

Contractor shall develop a Project Charter for the Upgraded System (the "Project Charter"), which shall be mutually approved by the Parties. Specifically, Contractor shall address each Task and Subtask to be performed through and including System Acceptance of the Upgraded System. The Project Charter shall address at least the following areas in substance, as applicable to the Upgraded System:

- A. Project Goals and Objectives
- B. Project Scope
- C. System Description
- D. Project Deliverables – Listing all Deliverables and identifying milestones among those Deliverables.
- E. Anticipated Project Phases
- F. Key Project Assumptions
- G. Potential Project Risks and Mitigation Strategies
- H. Project Organization: Contractor and County Staffing Roles and Responsibilities
- I. Communication Plan – Addressing status reports and conferences, steering committee reports and meetings, change requests, reporting of testing incidents and technical issues, issue escalation and dispute resolution procedures.
- J. Change Management / Control Plan – Providing a plan to mitigate changes to the Upgraded System, to help ensure the project stays within budget, and to ensure that changes are implemented only in accordance with relevant provisions of the Agreement.
- K. Implementation Work Plan – Providing a detailed project schedule with Project Milestones, start and completion dates for each Deliverable, Task and Subtask,

indicating Contractor and County staffing roles and responsibilities and Acceptance Criteria for each Deliverable, as agreed to between County and Contractor.

L. Upgraded System Test Plan – Providing a plan for testing the Upgraded System in order to confirm that the Upgraded System, together with all other System components, performs in accordance with the System Requirements and other Specifications, which (1) describes the approach to those tests to be conducted by Contractor and to those tests to be conducted by County, (2) identifies the tests, including scope and depth of such tests, (3) identifies the testing methodologies, and (4) includes a method for documenting and reporting compliance with the System Requirements and other Specifications (the "Upgraded System Test Plan"). The Upgraded System Test Plan shall include the foregoing for all tests described in this Statement of Work.

M. Data Conversion and Migration Plan

N. Training Plan

Contractor shall also update the Project Charter on a monthly basis with the exception of the Implementation Work Plan and Potential Project Risks and Mitigation Strategies sections, which will be updated as changes are made. Additionally, the Upgraded System Test Plan, Data Conversion and Migration Plan, and Training Plan shall be updated as needed in connection with performance of the applicable Tasks, Subtasks, and Deliverables in this Statement of Work. If requested by County, Contractor shall be available to meet prior to scheduled status meetings to discuss any County proposed changes to the Project Charter, which Contractor shall thereafter memorialize as proposed changes to the Project Charter. Contractor shall submit all proposed changes to the Project Charter, whether initiated by County or Contractor, to County, in writing, as soon as reasonably practicable prior to the scheduled status conference at which the proposed changes are to be reviewed and approved. As soon as reasonably practicable following each status meeting, Contractor shall update the Project Charter to reflect any changes resulting from such status meeting that should reasonably be documented in the Project Charter.

Deliverable 1.2 – Project Charter (KEY)

Contractor shall provide County with an initial draft Project Charter within 30 calendar days of the Amendment 11 Effective Date, with the final version due within 60 calendar days of the Amendment 11 Effective Date. Contractor shall update and maintain the Project Charter through System Acceptance of the Upgraded System and at the intervals specified in Subtask 1.2 (Develop and Present Project Charter).

TASK 2 - PROJECT MANAGEMENT AND COORDINATION

Subtask 2.1 – Provide Ongoing Project Management, Prepare Status Reports and Conduct Meetings

Contractor shall manage project activities and resources and track project status. Contractor shall provide a mutually acceptable method of reporting ongoing project activities to County. All reports shall be electronic in accordance with this Statement of Work and prepared on at least a weekly basis through System Acceptance of the

Upgraded System and shall include a Project Status Report that, at a minimum, will include as applicable but not be limited to, the following information:

- A. Period covered by the report;
- B. Task(s) scheduled for completion which were completed;
- C. Task(s) scheduled for completion which were not completed, and explanation;
- D. Task(s) not scheduled for completion which were completed;
- E. Task(s) scheduled for completion next reporting period;
- F. Issue(s) resolved;
- G. Issue(s) to be resolved with recommended solution(s);
- H. Deliverable Status;
- I. Updated Implementation Work Plan;
- J. Decisions made and items pending decision;
- K. Newly identified risks; and
- L. Such other information as reasonably requested by County Project Director or Project Manager.

Contractor Project Manager, along with other project staff as needed, shall conduct status meetings with County Project Director and/or County Project Manager on at least a weekly basis through System Acceptance of the Upgraded System, the purposes of which are to review the status reports and any related matters, and to review and approve any proposed changes to the Project Charter. All variances shall be presented for approval at the status meetings.

Deliverable 2.1 – Ongoing Project Management, Status Reports and Meetings
(KEY)

Contractor shall prepare the status reports and conduct the status meetings as described in Subtask 2.1 (Provide Ongoing Project Management, Prepare Status Reports and Conduct Meetings).

Subtask 2.2 Prepare Steering Committee Reports and Conduct Steering Committee Meetings

The project will have a steering committee, which will consist of County and Contractor executive level staff, Project Directors and Project Managers. Contractor shall provide a mutually acceptable method of reporting ongoing project activities and any executive level project issues to the project's steering committee. All reports shall be prepared on at least a quarterly basis through System Acceptance of the Upgraded System and shall include such information as mutually agreed on by the Parties.

Contractor shall conduct meetings with the project's steering committee on at least a quarterly basis through System Acceptance of the Upgraded System, the purpose of which is to review the steering committee reports and any other executive level project issues. Such meetings shall be in person at a location approved by County. With respect to any steering committee meeting, either County or Contractor may request attendance of such other individuals as County or Contractor, as the case may be, feel necessary to address an item for review at such meeting.

Deliverable 2.2 – Steering Committee Reports and Conduct Steering Committee Meetings (KEY)

Contractor shall prepare the steering committee reports and conduct the steering committee meetings in person as described in Subtask 2.2 (Prepare Steering Committee Reports and Conduct Steering Committee Meetings).

TASK 3 – ANALYZE EXISTING COUNTY ENVIRONMENT

Subtask 3.1 - Analyze Existing County Environment

Contractor shall conduct an analysis of all existing County hardware, network and operating software to identify and document the technical requirements for the System, including end-user hardware devices, desktop software and operating systems, and WAN and LAN requirements for the successful implementation and operation of the System. Contractor shall make recommendations to County as to whether improvements are necessary in order to meet the minimum requirements for the County Environment and ensure readiness for the Upgraded System. Such recommendations shall be limited to those that are (a) required to ensure Compatibility with the Upgraded System and (b) consistent with mainstream personal computer hardware widely available from a variety of manufacturers and capable of running the then-current version of Microsoft Windows. For the sake of clarity, County shall bear the cost of purchasing any such improvements.

Deliverable 3.1 – Analyzed Existing County Environment

Contractor shall deliver the analysis and recommendations described in Subtask 3.1 (Analyze Existing County Environment). Upon System Acceptance of the Upgraded System, the minimum system requirements for the County Environment included in such analysis shall be deemed to update Exhibit E (Minimum System Requirements).

TASK 4 – MIGRATION TO SYSTEM ENVIRONMENTS IN AMAZON WEB SERVICES INFRASTRUCTURE

Subtask 4.1 – Prepare Plan for Migration of Upgraded System to Amazon Web Services Infrastructure

Contractor shall conduct an assessment of the existing System Environments and develop a plan (“Migration Plan”) for the implementation of and migration to new System Environments located in the Amazon Web Services GovCloud hosting infrastructure for the Upgraded System according to the County-approved architectural design for both of the following options for the Amazon Web Services

infrastructure: (1) high availability and Disaster Recovery architecture and (2) Disaster Recovery only architecture (each an “AWS Option”). If during development of the Migration Plan, County provides Contractor with access to an Amazon Web Services architect, Contractor agrees to work with such architect for purposes of exploring whether (a) either AWS Option may be implemented in an Amazon Web Services commercial cloud hosting infrastructure in a manner that will enable the Upgraded System, together with all other System components, to perform in accordance with the System Requirements and other Specifications, and/or (b) other possible architectural designs are available to achieve comparable performance to Contractor’s proposed high availability and Disaster Recovery architecture. County has the option to revise the AWS Options so that the migration is executed in an Amazon Web Services commercial cloud hosting infrastructure. Any corresponding price reduction associated with this option is as set forth in Attachment C.5 (Hosting Fees Detail) to the Schedule of Pricing and Payments. The Parties may additionally mutually agree to revise the AWS Options as a result of the work completed with such architect as described under clause (b). All such revisions shall be incorporated into the Migration Plan, and shall be considered part of the applicable AWS Option for all purposes under this Statement of Work.

The Migration Plan shall address all Work required in connection with the implementation of and migration, which shall include but not be limited to the following:

Networking

- Configure VPC and subnets.
- Configure/document network ACLs (Access Control Lists)/security groups.
- Configure Virtual Firewall Appliance.
- Configure Elastic Load Balancers.
- Configure required auto scaling groups.
- Configure routing/route tables and routing failover mechanisms.

Environment

- Create, configure and harden images.
- Configure authentication services/DNS (Domain Name System) server and service configuration.
- Configure server environments.
 - After live environments are configured and tested, configure external site connection VPNs (Virtual Private Networks).
- Configure high availability servers and policies.
- Configure DNS configuration and failover.

Disaster Recovery network and replication configuration

As part of the Migration Plan, Contractor shall ensure that the necessary System Environments are in place in the Amazon Web Services infrastructure to support the Upgraded System including but not limited to test, training, staging and production environments, such that, once implemented and migrated, and whichever AWS Option is elected by County under Subtask 4.2 (Validation of High Availability AWS Option), the Upgraded System, together with all other System components, shall perform in accordance with the System Requirements and other Specifications. Without limiting any of the foregoing, the Migration Plan shall demonstrate that the System Environments located in the Amazon Web Services infrastructure, whichever AWS Option is elected by County under Subtask 4.2 (Validation of High Availability AWS Option), comply with all applicable security requirements set forth in Exhibit Q (Information Security Requirements), together with its Attachments. The Migration Plan shall also include a back-out plan to reinstate the prior application in the event the System Environments located in the Amazon Web Services infrastructure cannot be successfully implemented.

Deliverable 4.1 – Amazon Web Services Migration Plan (KEY)

Contractor shall deliver to County a written Migration Plan detailing the implementation of and migration of the Upgraded System to System Environments located in the Amazon Web Services infrastructure as described in Subtask 4.1 (Prepare Plan for Migration of Upgraded System to Amazon Web Services Infrastructure).

Subtask 4.2 – Validation of High Availability AWS Option

In order to determine whether the Upgraded System will perform in accordance with the System Requirements and Specifications in the AWS Option consisting of high availability and Disaster Recovery architecture, Contractor will configure and test a standard test System Environment for this AWS Option.

Contractor will implement and test this AWS Option from the inner tier out within the test System Environment, one tier at a time:

1. Database Tier
2. Application Tier
3. Web Tier

Any issues that arise that Contractor reasonably believes will require further development Work will be documented and certified by Contractor and a level of effort required for such Work will be agreed upon by the Parties. If alternatively Contractor determines that the Upgraded System will perform in accordance with the System Requirements and Specifications in the AWS Option consisting of high availability and Disaster Recovery architecture, Contractor shall provide written certification of the

same as Deliverable 4.2 (Certified Results of Validation of High Availability AWS Option).

At the end of all Work under this Subtask, the County shall determine whether it desires to proceed with migrating (a) to the AWS Option consisting of high availability and Disaster Recovery architecture immediately (“Option A”), or (b) to the AWS Option consisting of Disaster Recovery only and to retain the option to migrate at a later date to the AWS Option consisting of high availability and Disaster Recovery architecture (“Option B”).

If County determines to proceed with Option A, and if a level of effort was agreed upon by the Parties, then any necessary adjustment to this Statement of Work, as well as payment for the applicable Deliverables under this Task 4 (Migration to System Environments in Amazon Web Services Infrastructure) and/or any adjustment in Hosting Fees required because of mutually agreed upon revisions to the AWS Option that were incorporated into the Migration Plan under Subtask 4.1 (Prepare Plan for Migration of Upgraded System to Amazon Web Services Infrastructure), shall be documented pursuant to an Amendment in accordance with this Agreement.

It is understood and agreed by the Parties that if the County determines to proceed with Option B, County shall owe no further amounts with respect to any Work required to be completed by Contractor in order to determine whether the System will perform in accordance with the System Requirements and Specifications in the AWS Option consisting of high availability and Disaster Recovery architecture in connection with County’s election to migrate thereto.

Deliverable 4.2 – Certified Results of Validation of High Availability AWS Option
(KEY)

Contractor shall provide a written certification of the results of the Work described in Subtask 4.2 (Validation of High Availability AWS Option). Upon County’s approval of this Deliverable, County shall elect in writing with which AWS Option it desires to proceed.

Subtask 4.3 – Implement Elected Plan for Migration of Upgraded System to Amazon Web Services Infrastructure

Upon election by County of the AWS Option with which it desires to proceed following approval of Deliverable 4.2 (Certified Results of Validation of High Availability AWS Option) in accordance with the Agreement, Contractor shall execute the Migration Plan as it relates to the elected AWS Option for the implementation of and migration of the Upgraded System to the new System Environments located in the Amazon Web Services infrastructure.

Deliverable 4.3 – Implemented Elected Amazon Web Services Migration Plan

Contractor shall provide written certification to County that Upgraded System has been migrated to the System Environments located in the Amazon Web Services

infrastructure as described in Subtask 4.3 (Implemented Elected Plan for Migration of Upgraded System to Amazon Web Services Infrastructure).

Subtask 4.4 – Conduct Tests of the Upgraded System in the Amazon Web Services Infrastructure

Prior to Production Use, Contractor shall test the System Environments located in the Amazon Web Services infrastructure for the Upgraded System implemented under Subtask 4.3 (Implement Elected Plan for Migration of Upgraded System to Amazon Web Services Infrastructure) to ensure that the Upgraded System, together with all other System components, performs in accordance with the System Requirements and other Specifications. Contractor shall, with the assistance and cooperation from County as needed, test and verify the Upgraded System on such System Environments, in accordance with the Upgraded System Testing Plan. Contractor shall additionally provide assistance, cooperation and other Work described in Task 12 (User Acceptance Tests) in connection with County’s User Acceptance Testing in accordance with the User Acceptance Test Plan. If the Upgraded System or any other System component is not able to perform in accordance with System Requirements or other Specifications, Contractor shall, with assistance and cooperation from County as needed, determine the root cause of the non-conformance and perform such Work regarding the System Environments located in the Amazon Web Services infrastructure as necessary to permit successful use of the Upgraded System in Production Use. Contractor shall certify in writing as to the readiness of the System Environments located in the Amazon Web Services infrastructure for Production Use of the Upgraded System.

Deliverable 4.4 – Complete Tests of Amazon Web Services Infrastructure for Upgraded System

Contractor shall provide written certification as to the successful test and readiness of the Amazon Web Services Infrastructure for the Upgraded System as required by Subtask 4.4 (Conduct Tests of the Upgraded System in the Amazon Web Services Infrastructure).

Subtask 4.5 – Implement Amazon Web Services Infrastructure for Upgraded System

Contractor shall implement the System Environments located in the Amazon Web Services infrastructure for the Upgraded System.

Deliverable 4.5 – Implemented Amazon Web Services Infrastructure for Upgraded System (KEY)

Contractor shall complete the implementation of the System Environments located in the Amazon Web Services infrastructure for the Upgraded System. Once this Deliverable is approved by County in accordance with the Agreement, such System Environments shall constitute the “System Environments” under and as defined in the Agreement for all purposes.

Subtask 4.6 – Update Disaster Recovery Plan and Assessments for the Upgraded System on the Amazon Web Services Infrastructure

Contractor shall update the Disaster Recovery Plan, as well as provide updated responses to Attachment Q.2 (Application Security Requirements) and Attachment Q.3 (SaaS Vendor Security Privacy Assessment), as necessary to reflect that the System Environments located in the Amazon Web Services infrastructure for the Upgraded System. These updates are expected to include improved Service Level Requirements achieved by relocating the System Environments to the Amazon Web Services infrastructure. From time to time as requested by County, Contractor shall update the Disaster Recovery Plan, as well as Contractor's responses to Attachment Q.2 (Application Security Requirements) and Attachment Q.3 (SaaS Vendor Security Privacy Assessment) or any update or replacement to such Attachments.

Deliverable 4.6 – Updated Disaster Recovery Plan and Assessments for the Upgraded System (KEY)

Contractor shall deliver and implement an updated Disaster Recovery Plan, as well as Contractor's responses to Attachment Q.2 (Application Security Requirements) and Attachment Q.3 (SaaS Vendor Security Privacy Assessment), for the Upgraded System as described in Subtask 4.6 (Update Disaster Recovery Plan and Assessments for the Upgraded System on the Amazon Web Services Infrastructure). Upon County's approval of the updated Disaster Recovery Plan, as well as Contractor's response to Attachment Q.2 (Application Security Requirements) and Attachment Q.3 (SaaS Vendor Security Privacy Assessment), in accordance with the Agreement, the updated Disaster Recovery Plan shall be the Disaster Recovery Plan referenced as Attachment F.3 (Disaster Recovery Plan) for all purposes under the Agreement, and Contractor's responses to previously provided to County with respect to Attachment Q.2 (Application Security Requirements) and Attachment Q.3 (SaaS Vendor Security Privacy Assessment) shall additionally deemed to be updated for purpose of Contractor's compliance with the same under the Agreement.

OPTIONAL Subtask 4.7 – Prepare for Migration of System to High Availability

In the event County issues a written notice to proceed with respect to migration of the then-current System to the AWS Option consisting of high availability and Disaster Recovery architecture ("High Availability"), Contractor shall accordingly update the Migration Plan delivered by Contractor and approved by County as Deliverable 4.1 (Amazon Web Services Migration Plan) for such migration. The updated Migration Plan shall comply with all requirements of Subtask 4.1 (Prepare for Migration of Upgraded System to Amazon Web Services Infrastructure) as such requirements relate to High Availability and the then-current System.

OPTIONAL Deliverable 4.7 – Updated Migration Plan for High Availability (KEY)

Contractor shall deliver to County a written updated Migration Plan detailing the implementation of and migration of the then-current System to High Availability as described in Subtask 4.7 (Prepare for Migration of System to High Availability).

OPTIONAL Subtask 4.8 – Implement Updated Plan for Migration of System to High Availability

Contractor shall execute the updated Migration Plan for the implementation of and migration of the then-current System to the new High Availability System Environments located in the Amazon Web Services infrastructure.

OPTIONAL Deliverable 4.8 – Implemented Updated Migration Plan for High Availability

Contractor provide written certification to County that the then-current System has been migrated to the High Availability System Environments located in the Amazon Web Services infrastructure as described in Subtask 4.8 (Implement Updated Plan for Migration of System to High Availability).

OPTIONAL Subtask 4.9 – Conduct Tests of the System in the High Availability Infrastructure

Prior to Production Use, Contractor shall update the Upgraded System Testing Plan as necessary to reflect testing needed to confirm that the System in the High Availability System Environments implemented under Subtask 4.8 (Implement Updated Plan for Migration of System to High Availability) performs in accordance with the System Requirements and other Specifications. Once County has approved the updated Upgraded System Testing Plan in accordance with the Agreement, Contractor shall, with the assistance and cooperation from County as needed, test and verify the System on such System Environments, in accordance with the updated Upgraded System Testing Plan. Contractor shall additionally provide assistance, cooperation and other Work described in Task 12 (User Acceptance Tests) in connection with County's User Acceptance Testing in accordance with a User Acceptance Test Plan that has similarly been updated as needed. If the System or any component thereof is not able to perform in accordance with System Requirements or other Specifications, Contractor shall, with assistance and cooperation from County as needed, determine the root cause of the non-conformance and perform such Work regarding the High Availability System Environments as necessary to permit successful use of the System in Production Use. Contractor shall certify in writing as to the readiness of the High Availability System Environments located in the Amazon Web Services infrastructure for Production Use of the System.

OPTIONAL Deliverable 4.9 – Complete Tests of the System in the High Availability Infrastructure

Contractor shall provide written certification as to the successful test and readiness of the High Availability System Environments for the System as required by Subtask 4.9 (Conduct Tests of the System in the High Availability Infrastructure).

OPTIONAL Subtask 4.10 – Implement High Availability Infrastructure for System

Contractor shall implement the High Availability System Environments located in the Amazon Web Services infrastructure for the System.

OPTIONAL Deliverable 4.10 – Implemented High Availability Infrastructure for System (KEY)

Contractor shall complete the implementation of the High Availability System Environments located in the Amazon Web Services infrastructure for the System. Once this Deliverable is approved by County in accordance with the Agreement, such System Environments shall constitute the “System Environments” under and as defined in the Agreement for all purposes.

OPTIONAL Subtask 4.11 – Acceptance of High Availability Infrastructure for System

Contractor shall achieve acceptance of the High Availability System Environments for the System when (a) all System functions and features operate in the High Availability Production Environment without Deficiencies of Severity Level Medium or more severe (as defined in the Service Level Requirements) for one continuous uninterrupted ninety (90) day period, commencing on the date specified below in this Subtask 4.11 (Acceptance of High Availability Infrastructure for System) and (b) all Deficiencies of Severity Level Low (as defined in the Service Level Requirements) shall have been corrected in accordance with the timeframes set forth in the Service Level Requirements. The 90-day period shall commence on the date as of which Contractor has completed and County has approved in accordance with the Agreement, Deliverable 4.10 (Implemented High Availability Infrastructure for Upgraded System). The 90-day period shall restart upon County’s approval in accordance with this Agreement of Contractor Interim Solution (as defined in the Service Level Requirements) of Deficiencies having a Severity Level of Medium or more severe.

OPTIONAL Deliverable 4.11 – Acceptance of High Availability Infrastructure for System (KEY)

Contractor shall certify that Contractor has successfully completed all requirements for acceptance of the High Availability System Environments for the System as set forth in Subtask 4.11 (Acceptance of High Availability Infrastructure for System).

OPTIONAL Subtask 4.12 – Update Disaster Recovery Plan and Assessments for the System on the High Availability Infrastructure

Contractor shall update the Disaster Recovery Plan, as well as provide updated responses to Attachment Q.2 (Application Security Requirements) and Attachment Q.3 (SaaS Vendor Security Privacy Assessment), as necessary to reflect that the High Availability System Environments located in the Amazon Web Services infrastructure for the System. These updates are expected to include improved Service Level Requirements achieved relocating the System Environments to High Availability in the Amazon Web Services infrastructure. From time to time as requested by County, Contractor shall update the Disaster Recovery Plan, as well as Contractor’s responses to Attachment Q.2 (Application Security Requirements) and Attachment Q.3 (SaaS

Vendor Security Privacy Assessment) or any update or replacement to such Attachments.

OPTIONAL Deliverable 4.12 – Updated Disaster Recovery Plan and Assessments for the System in High Availability (KEY)

Contractor shall deliver and implement an updated Disaster Recovery Plan, as well as Contractor's responses to Attachment Q.2 (Application Security Requirements) and Attachment Q.3 (SaaS Vendor Security Privacy Assessment), for the Upgraded System as described in Subtask 4.12 (Update Disaster Recovery Plan and Assessments for the System on the High Availability Infrastructure). Upon County's approval of the updated Disaster Recovery Plan, as well as Contractor's response to Attachment Q.2 (Application Security Requirements) and Attachment Q.3 (SaaS Vendor Security Privacy Assessment), in accordance with the Agreement, the updated Disaster Recovery Plan shall be the Disaster Recovery Plan referenced as Attachment F.3 (Disaster Recovery Plan) for all purposes under the Agreement, and Contractor's responses to previously provided to County with respect to Attachment Q.2 (Application Security Requirements) and Attachment Q.3 (SaaS Vendor Security Privacy Assessment) shall additionally deemed to be updated for purpose of Contractor's compliance with the same under the Agreement.

TASK 5 – REQUIREMENTS GATHERING/VALIDATION AND SYSTEM DESIGN

Subtask 5.1 – Gather and Validate Upgraded System Requirements

Contractor shall conduct requirements gathering and validation activities in preparation for the Upgraded System for each DPH Program. This will, at a minimum, include:

- A. Conducting meetings to complete gathering and thereafter to validate System Requirements set forth in Exhibit D (Description of System Software) including all Attachments thereto, with County-designated Subject Matter Experts ("SMEs"). This includes, but is not limited to, System Requirements for new Core Applications and/or Third Party Software being implemented as part of the Upgraded System;
- B. Identifying any missing, unclear, or extraneous System Requirements; and
- C. Documenting changes to System Requirements.

Deliverable 5.1 – Validated System Requirements

Contractor shall deliver the validated System Requirements for each DPH Program.

Subtask 5.2 – Develop System Design Specifications

Contractor shall provide draft design specifications in preparation for the Upgraded System for each DPH Program. Contractor will update the draft design specification to include mutually agreed upon changes and provide the County with final design specifications.

Deliverable 5.2 – Final System Design Specifications (KEY)

Contractor shall deliver draft and final design specifications for the Upgraded System for each DPH Program.

TASK 6 – SYSTEM BUILD AND CONFIGURATION

Subtask 6.1 – Complete System Build and Configuration for each DPH Program

Contractor shall build and/or configure the Upgraded System to meet all validated System Requirements identified in Subtask 5.1 (Gather and Validate Upgraded System Requirements) and in accordance with the final design specifications under Subtask 5.2 (Develop System Design Specifications) for each DPH Program.

Deliverable 6.1 – Completed System Build and Configuration for each DPH Program (KEY)

Contractor shall complete the build and configuration of the Upgraded System for each DPH Program.

TASK 7 –DASHBOARDS FOR UPGRADED SYSTEM

Subtask 7.1 – Gather and Validate System Requirements for Dashboards

Contractor shall conduct requirements gathering and validation activities prior to development of the additional dashboards identified in Attachment D-4 (List of Dashboards) to Exhibit D (Description of System Software) for each DPH Program. This will, at a minimum, include:

- A. Conducting meetings to gather and thereafter to validate System Requirements for dashboards with County-designated SMEs;
- B. Identifying any missing, unclear, or extraneous System Requirements for dashboards; and
- C. Documenting changes to System Requirements for dashboards.

For the avoidance of doubt, the additional dashboards constitute Baseline Modifications.

Deliverable 7.1 – Validated System Requirements for Dashboards

Contractor shall deliver validated System Requirements for dashboards for each DPH Program.

Subtask 7.2 – Develop Dashboard Design Specifications

Contractor shall provide draft dashboard design specifications for each DPH Program in accordance with the validated System Requirements under Subtask 7.1 (Gather and Validate System Requirements for Dashboards). Contractor will update the draft dashboard design specifications to include mutually agreed upon changes and provide the County with final design specifications for each DPH Program.

Deliverable 7.2 – Final Dashboard Design Specifications (KEY)

Contractor shall deliver draft and final dashboard design specifications for each DPH Program.

Subtask 7.3 – Complete Dashboards for Each DPH Program

Contractor shall develop the dashboards required to meet all validated System Requirements for dashboards identified in Subtask 7.1 (Gather and Validate System Requirements for Dashboards) and in accordance with the final dashboards design specifications under Subtask 7.2 (Develop Dashboard Design Specifications) for each DPH Program.

Deliverable 7.3 – Completed Dashboards for Each DPH Program (KEY)

Contractor shall complete the development of the dashboards for each DPH Program as described in Subtask 7.3 (Complete Dashboards for Each DPH Program).

TASK 8 – SPECIFIED BASELINE INTERFACES FOR UPGRADED SYSTEM

Subtask 8.1 – Gather and Validate Specified Baseline Interface Requirements

Contractor shall conduct requirements gathering and validation activities prior to development of the following additional Baseline Interfaces as set forth in Attachment D.5 (Baseline Interface Requirements) to Exhibit D (Description of System Software):

1. Syndromic Surveillance Connections (New)
2. RightFax (New)

Contractor activities, shall at a minimum, include:

- A. Conducting meetings to gather and thereafter to validate Baseline Interface System Requirements with County-designated SMEs;
- B. Identifying any missing, unclear, or extraneous Baseline Interface System Requirements; and
- C. Documenting changes to Baseline Interface System Requirements.

Deliverable 8.1 – Validated Specified Baseline Interface Requirements

Contractor shall deliver validated Baseline Interface System Requirements described in Subtask 8.1 (Gather and Validate Specified Baseline Interface Requirements).

Subtask 8.2 – Develop Specified Baseline Interface Specifications

Contractor shall provide draft Baseline Interface design specifications for the Baseline Interfaces identified in Subtask 8.1 (Gather and Validate Specified Baseline Interface Requirements), in accordance with Attachment D.5 (Baseline Interface Requirements for Upgraded System) to Exhibit D (Description of System Software). Contractor will update the draft Baseline Interface design specifications to include mutually agreed upon changes and provide the County with final design specifications for the Baseline Interfaces.

Deliverable 8.2 – Final Specified Baseline Interface Design Specifications (KEY)

Contractor shall deliver draft and final Baseline Interface design specifications as described in Subtask 8.2 (Develop Specified Baseline Interface Specifications).

Subtask 8.3 – Develop Specified Baseline Interfaces

Contractor shall develop the new Baseline Interfaces to meet all validated Baseline Interface System Requirements identified in Subtask 8.1 (Validated Specified Baseline Interface Requirements) and in accordance with the final Baseline Interface design specifications under Deliverable 8.2 (Final Specified Baseline Interface Design Specifications).

Deliverable 8.3 – Completed Specified Baseline Interfaces

Contractor shall complete development of the Baseline Interfaces described in Subtask 8.3 (Develop Specified Baseline Interfaces).

Subtask 8.4 – Conduct Specified Baseline Interface Tests

Prior to Production Use, Contractor shall test all components of each Interface developed under Subtask 8.3 (Develop Specified Baseline Interfaces). Contractor shall, with the assistance and cooperation from County as needed, test and verify the validity of data being transmitted from source to destination, in accordance with the Upgraded System Test Plan. Contractor shall additionally provide assistance, cooperation and other Work described in Task 12 (User Acceptance Tests) in connection with County's User Acceptance Testing in accordance with the User Acceptance Test Plan. If an Interface does not conform to System Requirements or other Specifications, Contractor shall, with assistance and cooperation from County as needed, determine the root cause of the non-conformance and revise the Baseline Interface as necessary to permit successful completion of the Interface tests. Contractor shall certify in writing as to the success of each Interface test and the readiness of each Interface for Production Use.

Deliverable 8.4 – Complete Specified Baseline Interface Tests

Contractor shall provide written certification as to the successful test and readiness of each Interface for Production Use, as required by Subtask 8.4 (Conduct Specified Baseline Interface Tests).

Subtask 8.5 – Implement Specified Baseline Interfaces in Production

Contractor shall implement in Production Use, the Baseline Interfaces certified pursuant to Subtask 8.4 (Conduct Specified Baseline Interface Tests).

Deliverable 8.5 – Implemented Specified Baseline Interfaces in Production (KEY)

Contractor shall complete the promotion of the Baseline Interfaces in Production Use as described in Subtask 8.5 (Implement Specified Baseline Interfaces in Production).

TASK 9 – OTHER BASELINE MODIFICATIONS FOR UPGRADED SYSTEM

Subtask 9.1 – Validate Requirements for Other Baseline Modifications

Contractor shall conduct requirements gathering and validation activities prior to development of the additional Baseline Modifications identified in Attachment D.6 (List of Other Baseline Modifications for Upgraded System) to Exhibit D (Description of System Software). This will, at a minimum, include:

- A. Conducting meetings to gather and thereafter to validate Baseline Modification System Requirements with County-designated SMEs;
- B. Identifying any missing, unclear, or extraneous Baseline Modification System Requirements; and
- C. Documenting changes to Baseline Modification System Requirements.

For the avoidance of doubt, Baseline Modifications constituting dashboards and reports are addressed in Tasks 7 (Dashboards for Upgraded System) and 21 (Reports for Upgraded System).

Deliverable 9.1 – Validated Requirements for Other Baseline Modifications

Contractor shall deliver validated Baseline Modification System Requirements.

Subtask 9.2 – Develop Other Baseline Modification Design Specifications

Contractor shall provide draft design specifications for the Baseline Modifications identified in Attachment D.6 (List of Other Baseline Modifications for Upgraded System) to Exhibit D (Description of System Software). Contractor will update the draft Baseline Modification design specifications to include mutually agreed upon changes and provide the County with final design specifications.

Deliverable 9.2 – Final Other Baseline Modification Design Specifications (KEY)

Contractor shall deliver draft and final Baseline Modification design specifications.

Subtask 9.3 – Complete Other Baseline Modifications for Upgraded System

Contractor shall develop the Baselines Modifications identified in Subtask 9.1 (Validate Requirements for Other Baseline Modifications) and in accordance with the final Baseline Modifications design specifications under Subtask 9.2 (Develop Other Baseline Modification Design Specifications).

Deliverable 9.3 – Completed Other Baseline Modifications for Upgraded System (KEY)

Contractor shall complete development of the Baseline Modifications as described in Subtask 9.3 (Complete Other Baseline Modifications for Upgraded System).

TASK 10 – INSTALL UPGRADED SYSTEM ON TEST ENVIRONMENT

Subtask 10.1 – Install Upgraded System in Test Environment

Contractor shall install the Upgraded System for each DPH Program in the Test Environment.

Deliverable 10.1 – Installed Upgraded System in Test Environment

Contractor shall deliver a written certification that the Upgraded System for each DPH Program is installed and accessible to County in the Test Environment.

TASK 11 – UPGRADED SYSTEM TESTING

Subtask 11.1 – Conduct Tests of the Upgraded System

Following Contractor's successful completion of the build and installation of System Software for the Upgraded System by and among DPH Programs, Contractor, with the assistance and cooperation from County as needed, shall perform all tests of the Upgraded System, together with all other system Components, identified in, and in accordance with, the Upgraded System Test Plan and shall certify in writing as to the successful completion of all such tests. The Upgraded System Test plan shall include, at a minimum, the performance of each of the following types of testing:

1. Unit Testing
2. Smoke Testing
3. Functional Testing
4. Regression Testing
5. Integration Testing of System Workflows
6. Performance/Load Testing
7. Hardware/Software Compatibility Testing
8. System Acceptance Testing

Deliverable 11.1 –Certification of Testing of Upgraded System (KEY)

Contractor shall perform all tests of the Upgraded System by and among DPH Programs described in Subtask 11.1 (Conduct Tests of the Upgraded System) and provide written certification as to the successful completion of all such tests.

TASK 12 – USER ACCEPTANCE TESTS

Subtask 12.1 – Develop User Acceptance Test Plan

With reference to the Upgraded System Test Plan, County will prepare a plan for conducting User Acceptance Tests for the Upgraded System (the "User Acceptance Test Plan"), which will include descriptions of the purpose and expected results of each User Acceptance Test and corresponding test scripts by and among DPH Programs. The User Acceptance Test Plan will include a method for documenting and reporting compliance with System Requirements and other Specifications. Contractor shall assist and cooperate with County as needed during the preparation of the User Acceptance Test Plan and shall review and comment on such Plan to assist County with its objective to develop a thorough User Acceptance Test Plan that will provide

assurance that the Upgraded System, together with all other System components, performs in accordance with the System Requirements and other Specifications.

Deliverable 12.1 – Completed User Acceptance Test Plan

Contractor shall provide assistance and cooperation to County as needed during the preparation of the User Acceptance Test Plan and shall review and comment on such Plan as described in Subtask 12.1 (Develop User Acceptance Test Plan). This Deliverable shall be considered complete when County notifies Contractor that County has completed User Acceptance Test Plan and is ready to commence User Acceptance Testing.

Subtask 12.2 – Conduct User Acceptance Tests

County will, with assistance and cooperation from Contractor as needed, perform User Acceptance Tests in accordance with the User Acceptance Test Plan by and among DPH Programs. There shall be several cycles of the tests performed (testing shall be repeated as necessary) before User Acceptance Tests are complete. When User Acceptance Tests are successfully completed, the Upgraded System, together with all other System components, shall be ready for implementation.

Results of the User Acceptance Test shall be documented, reviewed, and approved in writing by County. In the event of missing or improperly operating functions, Contractor shall be notified, in writing, by County Project Director, or designee and Contractor shall work diligently to correct the Deficiencies following notification thereof. During this testing period, all personnel designated by County Project Director to participate in User Acceptance Tests shall have all necessary systems access permission levels for the purpose of evaluating its functionality.

User Acceptance Test shall not be considered complete until all functionality of the Upgraded System, together with all other System components, has been successfully tested and County Project Director has confirmed that success in writing. In the event the User Acceptance Test results do not satisfy all requirements, as determined by County:

- (1) Contractor shall implement the proposed solution until such time as County provides written approval.
- (2) County shall then perform the User Acceptance Tests again.

Deliverable 12.2 – Completed User Acceptance Tests (KEY)

Contractor shall provide the assistance, cooperation and other Work described in Subtask 12.2 (Conduct User Acceptance Tests). This Deliverable shall be considered complete when County notifies Contractor that County has completed User Acceptance Testing and has found no Deficiencies.

TASK 13 – DATA CONVERSION AND MIGRATION

Subtask 13.1 – Develop Data Conversion and Migration Plan

Contractor shall develop a data conversion and migration strategy and contingency plan ("Data Conversion and Migration Plan") that addresses the programs and

processes for conducting data conversion and migration and the methods for validating success of conversion and migration, all for each Additional DPH Program. The Data Conversion and Migration Plan shall include a back-out method to allow the County to revert to the prior software version by Additional DPH Program, with all data intact, in the event that the data conversion and migration are unsuccessful.

Deliverable 13.1 – Data Conversion and Migration Plan (KEY)

Contractor shall deliver the Data Conversion and Migration Plan as described in Subtask 13.1 (Develop Data Conversion and Migration Plan).

Subtask 13.2 – Conduct Data Conversion and Migration Test

Prior to User Acceptance Testing (see Task 12), Contractor shall test conversion and migration of the existing data using the conversion and migration programs and processes developed under Subtask 13.1 (Develop Data Conversion and Migration Plan). This shall be done by Contractor by and among Additional DPH Programs. Contractor shall, with the assistance and cooperation from County as needed, test and verify the validity of the test conversion and migration in accordance with the Data Conversion and Migration Plan and shall certify in writing as to the success of the same prior to delivering the test conversion and migration for County testing and verification. County will, with the assistance and cooperation from Contractor as needed, thereafter test and verify the validity of the test conversion and migration and approve or disapprove of the conformance of the test conversion and migration to Data Conversion and Migration Plan. If County disapproves of the test conversion and migration, Contractor shall, with assistance and cooperation from County as needed, determine the root cause of the failure and revise the Data Conversion and Migration Plan as necessary to permit successful completion of the test conversion and migration.

Deliverable 13.2 – Conduct Conversion and Migration Test

Contractor shall provide written certification as to the successful test conversion and migration by and among Additional DPH Programs and shall provide assistance and cooperation to County as needed with County's test and verification of the test conversion and migration as required by Subtask 13.2 (Conduct Data Conversion and Migration Test).

Subtask 13.3 – Perform Data Conversion and Migration for Each Additional DPH Program

Following User Acceptance Testing (see Task 12) but prior to Perform System Cutover to Production use for Each DPH Program (see Subtask 17.1), Contractor shall perform data conversion and migration for each Additional DPH Program in accordance with Data Conversion and Migration Plan.

Deliverable 13.3 – Complete Data Conversion and Migration for Each Additional DPH Program (KEY)

Contractor shall perform data conversion and migration for each Additional DPH Program and certify in writing that Contractor has successfully performed all data conversion and migration in accordance with the Data Conversion and Migration Plan.

TASK 14 – INTEGRATION WITH ACTIVE DIRECTORY AND MULTI-FACTOR AUTHENTICATION

Subtask 14.1 – Validate Integration Approach for Authentication

Contractor shall validate with County its approach to integration with Active Directory and Multi-Factor Authentication prior to implementation of the Upgraded System.

This will, at a minimum, include:

- A. Conducting meetings to validate integration approach set forth in Attachment Q-1 (Authentication Requirements) including all Attachments thereto to Exhibit Q (Information Security Requirements), with County-designated SMEs;
- B. Identifying any missing, unclear, or extraneous System Requirements regarding authentication; and
- C. Documenting implementation approach to comply with in Attachment Q-1 (Authentication Requirements) including all Attachments thereto to Exhibit Q (Information Security Requirements).

Deliverable 14.1 – Validated Integration Approach for Authentication (KEY)

Contractor shall deliver validated approach to comply with Attachment Q-1 (Authentication Requirements) including all Attachments thereto to Exhibit Q (Information Security Requirements).

Subtask 14.2 – Develop Authentication Integration

Contractor shall develop and implement the authentication integration for the Upgraded System detailed under Subtask 14.1 (Validate Integration Approach for Authentication).

Deliverable 14.2 – Authentication Integration

Contractor shall complete development and implementation of the authentication integration for the Upgraded System as described in Subtask 14.2 (Develop Authentication Integration).

Subtask 14.3 – Conduct Authentication Integration Tests

Prior to Production Use, Contractor shall test the integration of the authentication under delivered under Deliverable 14.2 (Authentication Integration). Contractor shall, with the assistance and cooperation from County as needed, test and verify the validity of the authentication integration, in accordance with the Upgraded System Test Plan. Contractor shall additionally provide assistance, cooperation and other Work described in Task 12 (User Acceptance Tests) in connection with County's User Acceptance Testing in accordance with the User Acceptance Test Plan. If the integration does not conform to System Requirements and other Specifications, Contractor shall, with assistance and cooperation from County as needed, determine the root cause of the non-conformance and revise the authentication integration as necessary to permit successful completion of the tests. Contractor shall certify in writing as to the success of each test and the readiness of the authentication integration for Production Use.

Deliverable 14.3 – Authentication Integration Tests

Contractor shall provide written certification as to the successful test and readiness of the authentication integration for Production Use, as required by Subtask 14.3 (Conduct Authentication Integration Tests).

Subtask 14.4 – Implement Authentication Integration in Production Use

Contractor shall implement the certified authentication integration to Production Use.

Deliverable 14.4 – Implemented Authentication Integration in Production (KEY)

Contractor shall complete the promotion of the authentication integration to Production Use.

TASK 15 – SYSTEM SECURITY

Subtask 15.1 – Develop and Provide System Security Plan

Contractor shall develop a security plan for the System (“Security Plan”). Varying levels of System security shall be documented on the Security Plan, in accordance with County’s security requirements specified in the Exhibit Q (Information Security Requirements), Attachment Q.2 (Application Security Requirements), Attachment Q.3 (SaaS Vendor Security Privacy Assessment), and otherwise in this Agreement. At a minimum, Contractor shall:

- A. Establish security standards for the System that are at a minimum compliant with the County’s security requirements as specified in the Exhibit Q (Information Security Requirements), together with all Attachments thereto, and otherwise in this Agreement, and support and be compliant with all applicable County Board of Supervisors-approved Information Technology (I/T) Security Policies set forth in Chapter 6 of the Board of Supervisors Policy Manual available as of the Amendment 11 Effective Date at <http://countypolicy.co.la.ca.us/>;
- B. Develop and implement a process to establish audit trails, report and monitor System security on an on-going basis;
- C. Develop and implement an audit process to ensure that System security measures address all applicable County policies, procedures and instructions;
- D. Review the network topology and access controls to ensure the security of the System;
- E. Ensure plan includes security standards for contingencies such as security incidents, disasters and emergency access;
- F. Ensure plan includes security standards for preventing malware infections that could lead to data loss, and loss of data integrity or availability;
- G. Review the security design with County; and
- H. Develop an System security testing plan to perform initial and twice a year application host and network (System Software and System Environments)

security vulnerability and penetration testing, as described in Subtask 15.2 (System Security Tests).

Contractor shall provide, in conjunction with the Security Plan, security Documentation on the following:

1. Security assessment/audit report which does the following:
 - a. Assesses the security (e.g., physical and logical) of the environment for all Users of System;
 - b. At a minimum addresses:
 - i. Regulatory compliance
 - ii. Web application and data security
 - iii. Identity management and access control
 - iv. Application and network (System Software and System Environments) vulnerability and penetration tests
 - v. Incident response and digital forensics
 - vi. Business continuity and disaster recovery
 - c. Identifies and describes the potential risks and vulnerabilities that may exist with the development and deployment of this application; and
 - d. Describes how all high-risk items have been mitigated and/or remediated.
2. Identification of minimum infrastructure security requirements - services, protocols, firewall rules, etc.;
3. Description of how the infrastructure will be assuring high-availability with automatic full hardware redundancy, load balancing and failover;
4. Documentation articulating a system to implement and maintain a patch management solution that will ensure currency of software updates and security patches for the System;
5. Network topology diagrams for the System Environments;
6. If applicable, reports on testing for compliance with Payment Card Industry Data Security Standards requirements (if the System manages credit card transactions); and
7. Illustration of data flow based security controls, including all security Interfaces, within the proposed application architecture.

Deliverable 15.1 - System Security Plan (KEY)

Contractor shall provide the Security Plan for the System and Documentation as described in Subtask 15.1 (Develop and Provide System Security Plan).

Subtask 15.2 – System Security Tests

Contractor shall conduct the security tests regarding the System (“System Security Tests”) to confirm that the County’s System security requirements described in Subtask 15.1 (Develop and Provide System Security Plan) will be met by the System Software and System Environments. Contractor shall submit its intended approach for

performing the test to County for approval (as an update to the Updated System Test Plan) and, following the County approval, shall conduct the System Security Tests and present the test results to County for approval. This task includes conducting the test and documenting test results. Based upon the results of these tests, Contractor shall make any changes required and shall re-test System to confirm these changes. Contractor shall certify, in writing, that the System Security Tests have been successfully completed and that Contractor has successfully completed all required corrective actions.

System Security Tests shall include, but is not limited to, the following:

1. Test for compliance with County's System security requirements described in Subtask 15.1 (Develop and Provide System Security Plan)
2. Application host and network (System Software and System Environment) vulnerability scanning
3. Automated application penetration testing
4. Manual application penetration testing to verify results of automated testing

The Contractor will use industry leading security testing tools to perform application host and network (System Software and System Environment) vulnerability scanning and penetration testing. The tools must receive periodic updates at a frequency of not more than a week from the tool vendor to test for recently published vulnerabilities.

Initial scans of pre-production System Software and System Environments must include deep intrusive credentialed scans using three (3) different types of users: non-authenticated user, authenticated user and admin user. All identified security issues (critical/high, medium, and low risk) will be documented, tracked and reported. All medium and critical/high-risk items will be mitigated and/or remediated and confirmed by re-testing before the System Software and System Environments can be deployed in production.

The Contractor shall subscribe to alerts/notifications of and monitor new security vulnerabilities and attacks through industry standard security bulletins, such as United States Computer Emergency Readiness Team (US-CERT), Internet Storm Center, and Securityfocus.com, etc. As soon as a critical/high or medium risk vulnerability is published, the Contractor will take steps to mitigate the vulnerability in accordance with the Service Level Requirements, pending patching of the System Software and System Environments to protect against the attacks. The Contractor will test the System Software and System Environments to confirm that no known vulnerabilities are reported.

Standard Contractor change management process will be followed for applying security patches to System Software and System Environments. Contractor will perform vulnerability scanning after System Software and System Environments are patched.

Deliverable 15.2 - System Security Tests

Contractor shall provide the System Security Tests as described in Subtask 15.2 (System Security Tests) by the dates set forth in the Project Charter and as requested by County.

Subtask 15.3 - System Security Documentation

Contractor shall provide System security Documentation that includes at a minimum

- A. Minimum System Environment requirements, such as required services, ports, and other System dependencies;
- B. All User and data Interfaces with User/account privilege requirements. For example:
 1. Logon page. Accessible to all Users;
 2. Create/Modify user page. Accessible to authenticated and authorized Users only;
 3. Application DB queries to backend databases. Can be called by application's trusted service accounts only;
- C. Privileged resources and privileged operations;
- D. Account creation and management policies and procedures such as;
 1. Creation of application roles and privileges;
 2. Mutually exclusive roles when assigning multiple roles to a User (segregation of duties);
 3. User account creation;
 4. Assignment/change of User privileges;
 5. User account de-provisioning;
 6. Management of administrative accounts – System admins, DB admins, User admins;
- E. Procedures for granting/revoking administrative privileges;
- F. Service accounts and minimum privileges required to run the System;
- G. Accounts used to authenticate with the database;
- H. An access control list with all System roles and their rights and privileges;
- I. Cryptographic algorithm and key size for the System data encryption requirements;
- J. Mechanisms used to protect the credentials over the wire (SSL (secure socket layer), IPsec (IP security), encryption and so on);
- K. Key management procedure to secure and manage the encryption keys; including key generation, renewal, revocation, recycle, and escrow;
- L. Data and application code backup, recovery and restore procedures; and
- M. Audit trails in the application and hosting environment (System Software and System Environments) with the key events and event parameters being logged and audited.

Deliverable 15.3 - System Security Documentation

Contractor shall provide the System Security Documentation as described in Subtask 15.3 (System Security Documentation) by the dates set forth in the Project Charter and as requested by County.

TASK 16 – SYSTEM TRAINING AND DOCUMENTATION

Subtask 16.1 - Train County Staff

Contractor shall prepare and implement training, including any necessary training manuals and materials. Contractor shall develop training courses addressing technical training for the end-user and train-the-trainers for the County's technical staff for the Upgraded System, and shall train County staff to deliver such courses. Train-the-trainer approach is to be provided in multiple sessions.

As part of the training, Contractor shall provide the designated County groups with extensive working knowledge of the Upgraded System capabilities. This includes training in the administration of the System Software as well as problem resolution training to ensure Users will become acquainted with error messages, on-line support, corrective actions, and best practices with respect to components of the System that can be customized by or at the direction of Users. Training manuals and materials will be created and incorporated into the on-line reference and users guide currently in the VCMR Software. Training will be instructor-led and be provided either on-site or via webinar. All trainings should be recorded, where possible, and be available in an archive for users to access at all times.

Deliverable 16.1 - Train County Staff

Contractor shall develop the training courses, materials and manuals, and train County staff to deliver such training courses, all as described under Subtask 16.1 (Train County Staff), and all by the date set forth in the Project Charter. All training manuals and materials shall be delivered electronically to the County no later than three Business Days prior to the training schedule in order to be printed.

Subtask 16.2 - Prepare User Documentation

Contractor shall prepare user reference Documentation for all System Software provided by Contractor for the Upgraded System using the "On-line User Guide and Reference Manual" currently in the VCMR Software.

Deliverable 16.2 - Provide User Documentation

Contractor shall provide completed user reference Documentation for all System Software provided by Contractor for the Upgraded System using the "On-line User Guide and Reference Manual" currently in the VCMR Software.

TASK 17 – SYSTEM IMPLEMENTATION FOR EACH DPH PROGRAM

Subtask 17.1 – Perform System Cutover to Production Use for Each DPH Program

Contractor shall prepare the Upgraded System for each DPH Program for Production Use. As part of System Cutover to Production Use for each DPH Program, Contractor shall, at a minimum:

- A. Confirm that County and Contractor, as the case may be, have successfully completed all Upgraded System tests and User Acceptance Tests; and
- B. Transfer the successfully tested System Software to the Production Environment.

Completion of this Subtask shall constitute Cutover to Production, and the System shall be in Production Use.

Deliverable 17.1 - System Cutover to Production Use for Each DPH Program (KEY)

Contractor shall complete the System Cutover to Production Use for each DPH Program as described in Subtask 17.1 (Perform System Cutover to Production Use for Each DPH Program).

TASK 18 –DPH PROGRAM ACCEPTANCE OF THE UPGRADED SYSTEM

Subtask 18.1 – DPH Program Acceptance of the Upgraded System

Contractor shall achieve DPH Program Acceptance of the Upgraded System for a DPH Program when (a) with respect to such DPH Program, all Upgraded System functions and features have been provided, installed and operate in the Production Environment without Deficiencies of Severity Level Medium or more severe (as defined in the Service Level Requirements) for one continuous uninterrupted 45 day period, commencing on the date of County's approval of Deliverable 17.1 (System Cutover to Production Use for Each DPH Program) for such DPH Program in accordance with the Agreement, and (b) all Deficiencies of Severity Level Low (as defined in the Service Level Requirements) shall have been corrected in accordance with the timeframes set forth in the Service Level Requirements. Without limiting the foregoing, the Upgraded System functions and features that must have been provided, installed and operated as specified in clause (a) of this Subtask 18.1 (DPH Program Acceptance of the Upgraded System) include but are not limited to the specified set of UDFs implemented under Tasks 5 (Requirements Gathering/Validation and System Design) and 6 (System Build and Configuration) of this Statement of Work. The 45 day period shall restart upon County's approval in accordance with this Agreement of Contractor Interim Solution (as defined in the Service Level Requirements) of Deficiencies having a Severity Level of Medium or more severe.

Deliverable 18.1 – DPH Program Acceptance of Upgraded System Certificate (KEY)

Contractor shall certify that Contractor has successfully completed all requirements for DPH Program Acceptance of the Upgraded System for each DPH Program as set forth in Subtask 18.1 (DPH Program Acceptance of the Upgraded System). Contractor shall complete this Deliverable for all DPH Programs by the date set forth in the Agreement.

TASK 19 – SYSTEM ACCEPTANCE OF UPGRADED SYSTEM

Subtask 19.1 – System Acceptance of Upgraded System

Contractor shall achieve System Acceptance of the Upgraded System when (a) all Upgraded System functions and features have been provided, installed and operate in the Production Environment without Deficiencies of Severity Level Medium or more severe (as defined in the Service Level Requirements) for one continuous uninterrupted ninety (90) day period, commencing on the date specified below in this

Subtask 19.1 (System Acceptance of Upgraded System) and (b) all Deficiencies of Severity Level Low (as defined in the Service Level Requirements) shall have been corrected in accordance with the timeframes set forth in the Service Level Requirements. The 90-day period shall commence on the date as of which Contractor has completed and County has approved in accordance with the Agreement, Deliverable 18.1 (DPH Program Acceptance of Upgraded System Certificate) for the final DPH Program. The 90-day period shall restart upon County's approval in accordance with this Agreement of Contractor Interim Solution (as defined in the Service Level Requirements) of Deficiencies having a Severity Level of Medium or more severe.

Deliverable 19.1 – System Acceptance of Upgraded System Certificate (KEY)

Contractor shall certify that Contractor has successfully completed all requirements for System Acceptance of the Upgraded System as set forth in Subtask 19.1 (System Acceptance of the Upgraded System) by the date required by the Agreement.

TASK 20 – CONDUCT PROJECT CLOSE-OUT ACTIVITIES

Contractor will be responsible for project close-out activities. The purpose of these activities is to resolve any outstanding project issues, obtain formal agreement from the project governance processes to officially close out the project, ensure that there is an official hand over of the Upgraded System from the project team to the maintenance, support, and hosting team, and conduct a thorough review of the project.

Subtask 20.1 – Develop Project Close-out Checklist

Contractor will develop a Deployment and Project Close-out Checklist. Contractor will review the Deployment and Project Close-out Checklist with County. Contractor will incorporate County feedback and proposed changes into the Project Close-out Checklist and submit a final version to County for approval.

Deliverable 20.1 - Finalized Project Close-out Checklist (KEY)

Contractor will provide a Draft Project Deployment and Close-out Checklist and a Finalized Project Deployment and Close-out Checklist incorporating County approved changes.

Subtask 20.2 – Conduct Project Close-out

During the project close-out, Contractor will:

- Conduct all of the activities defined in the Project Close-Out Checklist;
- Review all aspects of project close-out with County; and
- Address all outstanding issues and activities.

Deliverable 20.2 - Completed Project Close-out Activities (KEY)

Completed Project Close-out activities conducted by the Contractor as identified in the Finalized Project Deployment and Close-out Checklist.

TASK 21 – REPORTS FOR UPGRADED SYSTEM

Subtask 21.1 – Gather and Validate System Requirements for Reports

Contractor shall conduct requirements gathering and validation activities prior to development of the additional reports identified in Attachment D.3 (List of Reports) to

Exhibit D (Description of System Software) for each DPH Program. This will, at a minimum, include:

- A. Conducting meetings to gather and thereafter validate System Requirements for reports with County-designated SMEs;
- B. Identifying any missing, unclear, or extraneous System Requirements for reports;
- C. Providing best practices guidance regarding customizing reports and detailing impact of County-desired customization on performance of the reporting functionality and the System as a whole; and
- D. Documenting changes to System Requirements for reports.

For the avoidance of doubt, the additional reports constitute Baseline Modifications.

Deliverable 21.1 – Validated System Requirements for Reports

Contractor shall deliver validated System Requirements for reports for each DPH Program.

Subtask 21.2 – Develop Report Design Specifications

Contractor shall provide draft report design specifications for each DPH Program. Contractor will update the draft report design specifications to include mutually agreed upon changes and provide the County with final design specifications for each DPH Program.

Deliverable 21.2 – Final Report Design Specifications (KEY)

Contractor shall deliver draft and final report design specifications for each DPH Program.

Subtask 21.3 – Complete Reports for Each DPH Program

Contractor shall develop the reports required to meet all validated System Requirements for reports identified in Subtask 21.1 (Gather and Validate System Requirements for Reports) and in accordance with the final report design specifications under Subtask 21.2 (Develop Report Design Specifications) for each DPH Program.

Deliverable 21.3 – Completed Reports for Each DPH Program

Contractor shall complete the development of the reports for each DPH Program.

Subtask 21.4 – Conduct Report Tests for Each DPH Program

Prior to Production Use, Contractor shall test all components of the Baseline Modifications developed under Subtask 21.3 (Complete Reports for Each DPH Program) for each DPH Program. Contractor shall, with the assistance and cooperation from County as needed, test and verify the reports generated, in accordance with the Upgraded System Test Plan. Contractor shall additionally provide assistance, cooperation and other Work described in Task 12 (User Acceptance Tests) in connection with County's User Acceptance Testing in accordance with the User Acceptance Test Plan. If a Baseline Modification does not conform to System

Requirements or other Specifications, Contractor shall, with assistance and cooperation from County as needed, determine the root cause of the non-conformance and revise the Baseline Modification as necessary to permit successful completion of the Baseline Modification tests. Contractor shall certify in writing as to the success of each Baseline Modification test and the readiness of each Baseline Modification for Production Use.

Deliverable 21.4 – Complete Report Tests for Each DPH Program

Contractor shall provide written certification as to the successful test and readiness of the reports for Production Use for each DPH Program, as required by Subtask 21.4 (Conduct Report Tests for Each DPH Program).

Subtask 21.5 – Implement Reports in Production for Each DPH Program

Contractor shall implement in Production Use, the Baseline Modifications certified pursuant to Subtask 21.4 (Conduct Report Tests for Each DPH Program) for each DPH Program.

Deliverable 21.5 – Implemented Reports in Production for Each DPH Program (KEY)

Contractor shall complete the promotion of the Baseline Modifications in Production Use as described in Subtask 21.5 (Implement Reports in Production for Each DPH Program) for each DPH Program.

Subtask 21.6 – Acceptance of Reports for Each DPH Program

Contractor shall achieve Acceptance of Reports for an DPH Program when (a) all functions and features of the reports have been provided, installed and operate in the Production Environment without Deficiencies of Severity Level Medium or more severe (as defined in the Service Level Requirements) for one continuous uninterrupted 45 day period, commencing on the date of County's approval of Deliverable 21.5 (Implemented Reports in Production for Each DPH Program) in accordance with the Agreement for the applicable DPH Program, and (b) all Deficiencies of Severity Level Low (as defined in the Service Level Requirements) shall have been corrected in accordance with the timeframes set forth in the Service Level Requirements. The 45 day period shall restart upon County's approval in accordance with this Agreement of Contractor Interim Solution (as defined in the Service Level Requirements) of Deficiencies having a Severity Level of Medium or more severe.

Deliverable 21.6 – Acceptance of Reports for Each DPH Program (KEY)

For each DPH Program, Contractor shall certify that Contractor has successfully completed all requirements for Acceptance of Reports for Each DPH Program as set forth in Subtask 21.6 (Acceptance of Reports for Each DPH Program).

TASK 22 – CALREDIE BASELINE INTERFACE FOR UPGRADED SYSTEM

Subtask 22.1 – Gather and Validate CalREDIE Baseline Interface Requirements

Contractor shall conduct requirements gathering and validation activities prior to development of the Baseline Interface with and to the State of California's CalREDIE

system as set forth in Attachment D.7 (Design Specifications for the CalREDIE Interface) to Exhibit D (Description of System Software), as amended in accordance with the Agreement. Contractor activities, shall at a minimum, include:

- A. Conducting meetings to gather and thereafter validate Baseline Interface System Requirements with County-designated SMEs;
- B. Identifying any missing, unclear, or extraneous Baseline Interface System Requirements; and
- C. Documenting changes to Baseline Interface System Requirements.

Deliverable 22.1 – Validated CalREDIE Baseline Interface Requirements

Contractor shall deliver validated Baseline Interface System Requirements described in Subtask 22.1 (Gather and Validate CalREDIE Baseline Interface Requirements).

Subtask 22.2 – Develop CalREDIE Baseline Interface Specifications

Contractor shall provide draft Baseline Interface design specifications for the Baseline Interface identified in Subtask 22.1 (Gather and Validate CalREDIE Baseline Interface Requirements), in accordance with Attachment D.7 (Design Specifications for the CalREDIE Interface) to Exhibit D (Description of System Software), as amended in accordance with the Agreement. Contractor will update the draft Baseline Interface design specifications to include mutually agreed upon changes and provide the County with final design specifications for the Baseline Interface.

Deliverable 22.2 – Final CalREDIE Baseline Interface Design Specifications

Contractor shall deliver draft and final Baseline Interface design specifications as described in Subtask 22.2 (Develop CalREDIE Baseline Interface Specifications).

Subtask 22.3 – Develop CalREDIE Baseline Interface

Contractor shall develop the CalREDIE Baseline Interface to meet all validated Baseline Interface System Requirements identified in Subtask 22.1 (Gather and Validate CalREDIE Baseline Interface Requirements) and in accordance with the final Baseline Interface design specifications under Subtask 22.2 (Develop CalREDIE Baseline Interface Specifications).

Deliverable 22.3 – Completed CalREDIE Baseline Interface

Contractor shall complete development of the CalREDIE Baseline Interface described in Subtask 22.3 (Develop CalREDIE Baseline Interface).

Subtask 22.4 – Conduct CalREDIE Baseline Interface Tests

Prior to Production Use, Contractor shall test all components of the Interface developed under Subtask 22.3 (Develop CalREDIE Baseline Interface). Contractor shall, with the assistance and cooperation from County as needed, test and verify the validity of data being transmitted from source to destination, in accordance with the Upgraded System Test Plan. Contractor shall additionally provide assistance, cooperation and other Work described in Task 12 (User Acceptance Tests) in connection with County's User Acceptance Testing in accordance with the User

Acceptance Test Plan. If an Interface does not conform to System Requirements or other Specifications, Contractor shall, with assistance and cooperation from County as needed, determine the root cause of the non-conformance and revise the Baseline Interface as necessary to permit successful completion of the Interface tests. Contractor shall certify in writing as to the success of each Interface test and the readiness of each Interface for Production Use.

Deliverable 22.4 – Complete CalREDIE Baseline Interface Tests

Contractor shall provide written certification as to the successful test and readiness of each Interface for Production Use, as required by Subtask 22.4 (Conduct CalREDIE Baseline Interface Tests).

Subtask 22.5 – Implement CalREDIE Baseline Interface in Production

Contractor shall implement in Production Use, the Baseline Interface certified pursuant to Subtask 22.4 (Complete CalREDIE Baseline Interface Tests).

Deliverable 22.5 – Implemented CalREDIE Baseline Interface in Production

Contractor shall complete the promotion of the Baseline Interface in Production Use as described in Subtask 22.5 (Implement CalREDIE Baseline Interface in Production).

Subtask 22.6 – Acceptance of CalREDIE Baseline Interface

Contractor shall achieve Acceptance of CalREDIE Baseline Interface when (a) all functions and features of the CalREDIE Baseline Interface have been provided, installed and operate in the Production Environment without Deficiencies of Severity Level Medium or more severe (as defined in the Service Level Requirements) for one continuous uninterrupted 45 day period, commencing on the date of County's approval of Deliverable 22.5 (Implemented CalREDIE Baseline Interface in Production) in accordance with the Agreement, and (b) all Deficiencies of Severity Level Low (as defined in the Service Level Requirements) shall have been corrected in accordance with the timeframes set forth in the Service Level Requirements. The 45 day period shall restart upon County's approval in accordance with this Agreement of Contractor Interim Solution (as defined in the Service Level Requirements) of Deficiencies having a Severity Level of Medium or more severe.

Deliverable 22.6 – Acceptance of CalREDIE Baseline Interface (KEY)

Contractor shall certify that Contractor has successfully completed all requirements for Acceptance of CalREDIE Baseline Interface as set forth in Subtask 22.6 (Acceptance of CalREDIE Baseline Interface).

TASK 23 – ORCHID BASELINE INTERFACE FOR UPGRADED SYSTEM

Subtask 23.1 – Gather and Validate ORCHID Baseline Interface Requirements

Contractor shall conduct requirements gathering and validation activities prior to development of a one- or two-way Baseline Interface with and to the County's ORCHID system as set forth in Attachment D.8 (Design Specifications for the ORCHID Interface) to Exhibit D (Description of System Software), as amended in accordance with the Agreement. Contractor activities, shall at a minimum, include:

- A. Conducting meetings to gather and thereafter validate Baseline Interface System Requirements with County-designated SMEs;
- B. Identifying any missing, unclear, or extraneous Baseline Interface System Requirements; and
- C. Documenting changes to Baseline Interface System Requirements.

Deliverable 23.1 – Validated ORCHID Baseline Interface Requirements

Contractor shall deliver validated Baseline Interface System Requirements described in Subtask 23.1 (Gather and Validate ORCHID Baseline Interface Requirements).

Subtask 23.2 – Develop ORCHID Baseline Interface Specifications

Contractor shall provide draft Baseline Interface design specifications for the Baseline Interfaces identified in Subtask 23.1 (Gather and Validate ORCHID Baseline Interface Requirements), in accordance with as set forth in Attachment D.8 (Design Specifications for the ORCHID Interface) to Exhibit D (Description of System Software), as amended in accordance with the Agreement. Contractor will update the draft Baseline Interface design specifications to include mutually agreed upon changes and provide the County with final design specifications for the Baseline Interface.

Deliverable 23.2 – Final ORCHID Baseline Interface Design Specifications (KEY)

Contractor shall deliver draft and final Baseline Interface design specifications as described in Subtask 23.2 (Develop ORCHID Baseline Interface Specifications).

Subtask 23.3 – Develop ORCHID Baseline Interface

Contractor shall develop the ORCHID Baseline Interface to meet all validated Baseline Interface System Requirements identified in Subtask 23.1 (Gather and Validate ORCHID Baseline Interface Requirements) and in accordance with the final Baseline Interface design specifications under Subtask 23.2 (Develop ORCHID Baseline Interface Specifications).

Deliverable 23.3 – Completed ORCHID Baseline Interface (KEY)

Contractor shall complete development of the ORCHID Baseline Interface described in Subtask 23.3 (Develop ORCHID Baseline Interface).

Subtask 23.4 – Conduct ORCHID Baseline Interface Tests

Prior to Production Use, Contractor shall test all components of the Interface developed under Subtask 23.3 (Develop ORCHID Baseline Interface). Contractor shall, with the assistance and cooperation from County as needed, test and verify the validity of data being transmitted from source to destination, in accordance with the Upgraded System Test Plan. Contractor shall additionally provide assistance, cooperation and other Work described in Task 12 (User Acceptance Tests) in connection with County's User Acceptance Testing in accordance with the User Acceptance Test Plan. If an Interface does not conform to System Requirements or other Specifications, Contractor shall, with assistance and cooperation from County as needed, determine the root cause of the non-conformance and revise the Baseline Interface as necessary to permit successful completion of the Interface tests.

Contractor shall certify in writing as to the success of each Interface test and the readiness of each Interface for Production Use.

Deliverable 23.4 – Complete ORCHID Baseline Interface Tests (KEY)

Contractor shall provide written certification as to the successful test and readiness of each Interface for Production Use, as required by Subtask 23.4 (Conduct ORCHID Baseline Interface Tests).

Subtask 23.5 – Implement ORCHID Baseline Interface in Production

Contractor shall implement in Production Use, the Baseline Interface certified pursuant to Subtask 23.4 (Conduct ORCHID Baseline Interface Tests).

Deliverable 23.5 – Implemented ORCHID Baseline Interface in Production (KEY)

Contractor shall complete the promotion of the Baseline Interface in Production Use as described in Subtask 23.5 (Implement ORCHID Baseline Interface in Production).

Subtask 23.6 – Acceptance of ORCHID Baseline Interface

Contractor shall achieve Acceptance of ORCHID Baseline Interface when (a) all functions and features of the ORCHID Baseline Interface have been provided, installed and operate in the Production Environment without Deficiencies of Severity Level Medium or more severe (as defined in the Service Level Requirements) for one continuous uninterrupted 45 day period, commencing on the date of County's approval of Deliverable 23.5 (Implemented ORCHID Baseline Interface in Production) in accordance with the Agreement, and (b) all Deficiencies of Severity Level Low (as defined in the Service Level Requirements) shall have been corrected in accordance with the timeframes set forth in the Service Level Requirements. The 45 day period shall restart upon County's approval in accordance with this Agreement of Contractor Interim Solution (as defined in the Service Level Requirements) of Deficiencies having a Severity Level of Medium or more severe.

Deliverable 23.6 – Acceptance of ORCHID Baseline Interface (KEY)

Contractor shall certify that Contractor has successfully completed all requirements for Acceptance of ORCHID Baseline Interface as set forth in Subtask 23.6 (Acceptance of ORCHID Baseline Interface).

TASK 24 – PHYSICIAN PORTAL APPLICATION

Subtask 24.1 – Gather and Validate Physician Portal Application Requirements and Develop Specifications

Contractor shall conduct meetings with County-designated SMEs to gather and validate requirements for the Physician Portal Application as described in Exhibit D (Description of System Software), including its Attachments. Contractor shall provide draft configuration specifications for the Physician Portal Application requirements and update the draft configuration specifications to include mutually agreed upon changes. Contractor shall provide the County with final configuration specifications for the Physician Portal Application.

Deliverable 24.1 – Validated Physician Portal Application Requirements and Final Specifications (KEY)

Contractor shall deliver validated Physician Portal Application System Requirements and final Physician Portal Application configuration specifications as described in Subtask 24.1 (Gather and Validate Physician Portal Application Requirements and Develop Specifications).

Subtask 24.2 – Configure and Test Physician Portal Application

Contractor shall configure the Physician Portal Application in accordance with the validated Physician Portal Application System Requirements and final Physician Portal Application configuration specifications identified in Subtask 24.1 (Gather and Validate Physician Portal Application Requirements and Develop Specifications). Prior to Production Use, Contractor shall test all components of the Physician Portal Application configured under this Subtask. Contractor shall revise the Physician Portal Application as necessary to address any non-conformance and permit successful completion of all Physician Portal Application tests. Contractor shall certify in writing as to the success of each Physician Portal Application test and the readiness of the Physician Portal Application for Production Use.

Deliverable 24.2 – Completion of Configuration and Test of Physician Portal Application (KEY)

Contractor shall complete the configuration and test the Physician Portal Application described in Subtask 24.2 (Configure and Test Physician Portal Application). Contractor shall provide written certification as to the successful test and readiness of the Physician Portal Application for Production Use, as required by Subtask 24.2 (Configure and Test Physician Portal Application).

Subtask 24.3 – Implementation and Acceptance of Physician Portal Application

Contractor shall implement for Production Use, the Physician Portal Application certified pursuant to Subtask 24.2 (Configure and Test Physician Portal Application). Contractor shall achieve Acceptance of Physician Portal Application when (a) all functions and features of the Physician Portal Application have been provided, installed and operate in the Production Environment without Deficiencies of Severity Level Medium or more severe (as defined in the Service Level Requirements) for one continuous uninterrupted 45 day period, commencing on the date of County's approval of implementation under this Deliverable 24.3 (Implementation and Acceptance of Physician Portal Application) in accordance with the Agreement, and (b) all Deficiencies of Severity Level Low (as defined in the Service Level Requirements) shall have been corrected in accordance with the timeframes set forth in the Service Level Requirements. The 45 day period shall restart upon County's approval in accordance with this Agreement of Contractor Interim Solution (as defined in the Service Level Requirements) of Deficiencies having a Severity Level of Medium or more severe.

Deliverable 24.3 – Implementation and Acceptance of Physician Portal Application (KEY)

Contractor shall complete the promotion of the Physician Portal Application in Production Use as described in Subtask 24.3 (Implementation and Acceptance of

Physician Portal Application). Contractor shall certify that Contractor has successfully completed all requirements for Acceptance of Physician Portal Application as set forth in Subtask 24.3 (Implementation and Acceptance of Physician Portal Application).

TASK 25 – ELECTRONIC HEALTH RECORD GATEWAY APPLICATION

Subtask 25.1 – Install and Configure EHR Gateway Application

Contractor shall install and configure the EHR Gateway Application in accordance with the Health Level 7 International HL7 CDA® R2 Implementation Guide: Public Health Case Report, Release 2 - US Realm - the Electronic Initial Case Report (eICR) available at http://www.hl7.org/implement/standards/product_brief.cfm?product_id=436.

Deliverable 25.1 – Installation and Configuration of EHR Gateway Application

Contractor shall complete the installation and configuration of the EHR Gateway Application described in Subtask 25.1 (Install and Configure EHR Gateway Application).

Subtask 25.2 – Conduct EHR Gateway Messaging Test

Prior to Production Use, Contractor shall complete a successful exemplary test message using the EHR Gateway Application configured under Subtask 25.1 (Install and Configure EHR Gateway Application). Contractor shall, with the assistance and cooperation from County as needed, test and verify the validity of the EHR Gateway Application, in accordance with the Upgraded System Test Plan. If the EHR Gateway Application or any component thereof does not conform to System Requirements or other Specifications and/or cannot complete a successful exemplary test message, Contractor shall, with assistance and cooperation from County as needed, determine the root cause of the non-conformance and revise the EHR Gateway Application as necessary to complete a successful exemplary test message using the EHR Gateway application. Contractor shall certify in writing as to the success of the EHR Gateway Application exemplary message test and the readiness of the EHR Gateway Application for Production Use.

Deliverable 25.2 – Complete EHR Gateway Messaging Test

Contractor shall provide written certification as to the successful exemplary message test and readiness of the EHR Gateway Application for Production Use, as required by Subtask 25.2 (Conduct EHR Gateway Messaging Test).

Subtask 25.3 – Implementation and Acceptance of EHR Gateway Application

Contractor shall implement for Production Use, the EHR Gateway Application certified pursuant to Subtask 25.2 (Conduct EHR Gateway Messaging Test). Contractor shall achieve Acceptance of the EHR Gateway Application when (a) all functions and features of the EHR Gateway Application have been provided, installed and operate in the Production Environment without Deficiencies of Severity Level Medium or more severe (as defined in the Service Level Requirements) for one continuous uninterrupted 45 day period, commencing on the date on which Contractor first implements the EHR Gateway Application into Production Use under this Subtask 25.3 (Implementation and Acceptance of EHR Gateway Application), and (b) all Deficiencies of Severity Level Low (as defined in the Service Level Requirements)

shall have been corrected in accordance with the timeframes set forth in the Service Level Requirements. The 45 day period shall restart upon County's approval in accordance with this Agreement of Contractor Interim Solution (as defined in the Service Level Requirements) of Deficiencies having a Severity Level of Medium or more severe.

Deliverable 25.3 – Implementation and Acceptance of EHR Gateway Application (KEY)

Contractor shall certify that Contractor has successfully completed all requirements for Acceptance of EHR Gateway Application as set forth in Subtask 25.3 (Implementation and Acceptance of EHR Gateway Application).

TASK 26 – USER DEFINED FORMS FOR UPGRADED SYSTEM

Subtask 26.1 – Gather and Validate System Requirements for User Defined Forms (UDFs)

Contractor shall conduct requirements gathering and validation activities prior to development of the UDFs identified in Attachment D.9 (List of User Defined Forms (UDFs)) to Exhibit D (Description of System Software), as amended in accordance with the Agreement, for each DPH Program. This will, at a minimum, include:

- A. Conducting meetings to gather and thereafter validate System Requirements for UDFs with County-designated SMEs. As part of gathering business requirements, Contractor shall assess current business processes and workflows of each applicable DPH Program, as well as current data collection and reporting forms within each DPH Program, to the extent required to enable Contractor to design UDFs to support the business needs of such DPH Programs. Requirements analysis performed by Contractor will include the assessment and incorporation of processes, workflow and information shared by or affecting multiple programs that will share usage of a UDF or UDF field;
- B. Identifying any missing, unclear, or extraneous System Requirements for UDFs;
- C. Providing best practices guidance regarding customizing UDFs and detailing impact of County-desired customization on performance of the UDF functionality and the System as a whole; and
- D. Documenting System Requirements for UDFs. Requirements documentation will include identification of the DPH Program or Programs that will use the UDF as part of the analyzed business processes and workflows in Subtask 26.1 (Gather and Validate System Requirements for User Defined Forms (UDFs)), and the documentation will also map the UDFs to specific steps in the business workflow or process.

Deliverable 26.1 – Validated System Requirements for UDFs

Contractor shall deliver validated System Requirements for UDFs for each DPH Program.

Subtask 26.2 – Develop UDF Design Specifications

Contractor shall provide draft UDF design specifications for each DPH Program. UDF design specification documentation will include, but not be limited to, specification of all fields, layout, and business rules for each UDF. Contractor will update the draft UDF design specifications to include mutually agreed upon changes and provide the County with final design specifications for each DPH Program.

Deliverable 26.2 – Final UDF Design Specifications (KEY)

Contractor shall deliver draft and final UDF design specifications for each DPH Program.

Subtask 26.3 – Complete UDFs for Each DPH Program

Contractor shall develop the UDFs required to meet all validated System Requirements for reports identified in Subtask 26.1 (Gather and Validate System Requirements for User Defined Forms (UDFs)) and in accordance with the final UDFs design specifications under Subtask 26.2 (Develop UDF Design Specifications) for each DPH Program.

Deliverable 26.3 – Completed UDFs for Each DPH Program

Contractor shall complete the development of the UDFs for each DPH Program.

Subtask 26.4 – Conduct UDF Tests for Each DPH Program

Prior to Production Use, Contractor shall test all components of the UDFs developed under Subtask 26.3 (Complete UDFs for Each DPH Program) for each DPH Program. Contractor shall, with the assistance and cooperation from County as needed, test and verify the UDFs generated, in accordance with the Upgraded System Test Plan. Contractor shall additionally provide assistance, cooperation and other Work described in Task 12 (User Acceptance Tests) in connection with County's User Acceptance Testing in accordance with the User Acceptance Test Plan. If a UDF does not conform to System Requirements or other Specifications, Contractor shall, with assistance and cooperation from County as needed, determine the root cause of the non-conformance and revise the UDF as necessary to permit successful completion of the UDF tests. Contractor shall certify in writing as to the success of each UDF test and the readiness of each Baseline Modification for Production Use.

Deliverable 26.4 – Complete UDF Tests for Each DPH Program

Contractor shall provide written certification as to the successful test and readiness of the UDFs for Production Use for each DPH Program, as required by Subtask 26.4 (Conduct UDF Tests for Each DPH Program).

Subtask 26.5 – Implement UDFs in Production for Each DPH Program

Contractor shall implement in Production Use, the UDFs certified pursuant to Subtask 26.4 (Conduct UDF Tests for Each Program) for each DPH Program.

Deliverable 26.5 – Implemented UDFs in Production for Each DPH Program (KEY)

Contractor shall complete the promotion of the UDFs in Production Use as described in Subtask 26.5 (Implement UDFs in Production for Each DPH Program) for each DPH Program.

Subtask 26.6 – Acceptance of UDFs for Each DPH Program

Contractor shall achieve Acceptance of UDFs for an DPH Program when (a) all functions and features of the reports have been provided, installed and operate in the Production Environment without Deficiencies of Severity Level Medium or more severe (as defined in the Service Level Requirements) for one continuous uninterrupted 45 day period, commencing on the date of County's approval of Deliverable 26.5 (Implemented UDFs in Production for each DPH Program) in accordance with the Agreement for the applicable DPH Program, and (b) all Deficiencies of Severity Level Low (as defined in the Service Level Requirements) shall have been corrected in accordance with the timeframes set forth in the Service Level Requirements. The 45 day period shall restart upon County's approval in accordance with this Agreement of Contractor Interim Solution (as defined in the Service Level Requirements) of Deficiencies having a Severity Level of Medium or more severe.

Deliverable 26.6 – Acceptance of UDFs for Each DPH Program (KEY)

For each DPH Program, Contractor shall certify that Contractor has successfully completed all requirements for Acceptance of UDFs for Each DPH Program as set forth in Subtask 26.6 (Acceptance of UDFs for Each DPH Program).

TASK 27 – PROVIDE MAINTENANCE SERVICES

Subtask 27.1 – Provide Maintenance Services

During the Term of this Agreement, Contractor shall provide Maintenance Services in accordance with the Service Level Requirements.

Deliverable 27.1 – Provide Maintenance Services

During the Term of this Agreement, Contractor shall provide Maintenance Services in accordance with the Service Level Requirements.

TASK 28 – PROVIDE SUPPORT SERVICES

Subtask 28.1 – Provide Support Services

During the Term of this Agreement, Contractor shall provide Support Services in accordance with the Service Level Requirements.

Deliverable 28.1 – Provide Support Services

During the Term of this Agreement, Contractor shall provide Support Services in accordance with the Service Level Requirements.

TASK 29 – PROVIDE HOSTING SERVICES

Subtask 29.1 – Provide Hosting Services

During the Term of this Agreement, Contractor shall provide Hosting Services in accordance with the Service Level Requirements.

Deliverable 29.1 – Provide Hosting Services

During the Term of this Agreement, Contractor shall provide Hosting Services in accordance with the Service Level Requirements.

TASK 30 – PROVIDE AS-NEEDED ADDITIONAL WORK

Subtask 30.1 – Provide As-Needed Additional Work

Within 30 days (or such other mutually agreed upon date) of receipt of County Project Director's written request for Additional Work under Paragraph 7.1.5 (Additional Work) of the Base Agreement, Contractor shall, with the assistance and cooperation of County as needed, provide a written description of the Additional Work and a price quotation therefor, which shall be on a fixed price basis, unless the Parties mutually determine that a "not-to-exceed" time and materials basis is appropriate.

Thereafter, the Parties shall mutually and cooperatively draft a Change Order or Amendment, as the case may be, which includes the applicable documentation specified in this Task 30 (Provide As-Needed Additional Work) or as requested by County Project Director. Execution of the Change Order or Amendment, as the case may be, shall be in accordance with Paragraph 8.0 (Change Orders and Amendments) of the Base Agreement, and approval of the Work to be performed thereunder shall be in accordance with Paragraph 7.2 (Approval of Work) of the Base Agreement. Contractor's price quotations under each proposed Change Order and Amendment for Additional Work shall be valid for 60 days from the date of submission to County, unless such period is extended by County and Contractor.

Each Change Order or Amendment shall include the applicable of the following:

1. A description of the Additional Work to be performed under the Change Order or Amendment (Task and Deliverable-based, if applicable), and a statement, signed by Contractor Project Director, which explains and certifies that the Additional Work is outside the scope of Work then-required of Contractor under this Agreement;
2. Contractor staff and estimated personnel hours recommended for completion of such Additional Work;
3. Fixed price quotation or, if the Parties mutually determine appropriate, a "not-to-exceed" time and materials price quotation, which in either case is based on applicable pricing included in the Schedule of Pricing and Payments. The price quotation shall include future cost, if any, for Maintenance Services, Support Services and/or Hosting Services for such items (the assumption being no additional fees are required unless expressly identified). Unless otherwise agreed to in the applicable Change Order or Amendment, the payment schedule for Additional Work priced on a fixed price basis shall be as follows:

- (a) Twenty-five percent (25%) of the fixed price payable after County's approval in accordance with this Agreement of the System Requirements and other Specifications;
 - (b) Fifty percent (50%) of the fixed price payable after Contractor's delivery of a version of the software and/or system to be developed pursuant to the Additional Work deemed ready by Contractor for all associated testing;
 - (c) Twenty-five percent (25%) of the fixed price payable after County's approval in accordance with this Agreement of successful completion of all associated testing of the software and/or system developed pursuant to the Additional Work and the software and/or system is migrated to the Production Environment, unless County delays migration to the Production Environment for greater than 60 days from the date on which Contractor notifies County in writing of the successful completion of all associated testing of the software and/or system developed pursuant to the Additional Work and the software and/or system is ready to be migrated to the Production Environment, in which case such payment shall then become payable by County. County shall thereafter be entitled to reverse the payment (including through credit to other payments owed to Contractor under this Agreement) if once County is ready to migrate such Additional Work to the Production Environment, such Additional Work is not able to successfully complete County testing.
4. For Additional Modifications, Additional Interfaces and/or Additional Products, provide for the development and delivery of the applicable of the following:
- (a) Any additional System Requirements and other Specifications;
 - (b) An analysis of any impact on existing System Software components and future Updates and Version Releases;
 - (c) Test plan(s) using an approach similar to that which is outlined for the Upgraded System Test Plan (see Subtask 1.2 (Develop and Present Project Charter)); and
 - (d) An analysis of any required or recommended County Environment additions or upgrades, which required or recommended County Environment additions or upgrades shall be limited as described in the Service Level Requirements.
5. Any proposed modifications to the terms and conditions of the Agreement or its Exhibits/Attachments require an Amendment.
6. A completion schedule and a final delivery date for the Additional Work, including any post-delivery acceptance period as may be applicable;
7. If applicable, a revised Task and Deliverable completion schedule under the Statement of Work for the remaining Work (other than the Work requested under the Change Order or Amendment).

Upon execution of a Change Order or Amendment for Additional Work under Paragraph 8 (Change Orders and Amendments) of the Base Agreement, Contractor shall provide such Additional Work in accordance with this Task 30 (Provide As-Needed Additional Work), the applicable Change Order or Amendment, and otherwise with the Agreement.

Deliverable 30.1 - Provide As-Needed Additional Work

Contractor shall complete and deliver all Additional Work required under each executed Change Order and Amendment in accordance with this Task 30 (Provide As-Needed Additional Work), the applicable Change Order or Amendment, and otherwise with the Agreement. Upon completion and delivery by Contractor, and acceptance by County, of any Additional Modifications, Additional Interfaces and/or Additional Products, such Additional Modifications, Additional Interfaces or Additional Products, as the case may be, shall become part of and be included in the System Software for all purposes under the Agreement.

ATTACHMENT B.1

Additional DPH Programs

1.0 ADDITIONAL DEPARTMENT OF PUBLIC HEALTH (DPH) PROGRAMS TO BE ADDED PURSUANT TO EXHIBIT B (STATEMENT OF WORK)

As further defined in the Agreement, it is anticipated that each Additional DPH Program listed below will use IRIS to support their mission and responsibilities.

1.1 *Community Health Services (CHS)*

CHS' mission is to protect health, prevent disease and promote health and well-being across the life span through targeted population-based interventions and service operations that improve health and quality of life, and reduce health disparities.

CHS is responsible for:

- Providing clinic services through 14 public health centers (plus a satellite site on Skid Row);
- Conducting surveillance and medical case management of reportable communicable diseases;
- Containing the spread of communicable diseases, and
- Providing numerous outreach activities to engage the community as active participants to improve the health of residents.

1.2 *Division of HIV and STD Programs (DHSP)*

In 2011, the Department of Public Health combined the HIV Epidemiology Program, the Office of AIDS Programs and Policy, and the Sexually Transmitted Disease Program to form the Division of HIV and STD Programs (DHSP). DHSP's mission is to prevent and control the spread of HIV and STDs through epidemiological surveillance, implementation of evidence-based programs, coordination of prevention, care and treatment services, and the creation of policies that promote health.

DHSP continues to work closely and collaboratively with community-based organizations, other governmental offices, advocates, and people living with HIV/AIDS as it seeks to:

- control the spread of HIV and sexually transmitted diseases,
- monitor HIV/AIDS and STD morbidity and mortality,
- increase access to care for those in need, and
- eliminate HIV-related health inequalities.

1.3 Public Health Nursing Administration

Public Health Nursing promotes the well-being of communities and seeks to promote health, prevent disease, disability and premature death among all residents in the County of Los Angeles. Public Health Nursing strives to improve the quality of neighborhood life by working in a partnership with community residents to create the conditions that promote healthy lives. The IRIS Project reports to the Nursing Informatics Unit in Nursing Administration.

1.4 Public Health Investigation (PHI) Administration

PHI Administration directs the planning, implementation, and evaluation of PHI Practice activities, and ensures that PHI enforcement activities conform to applicable laws, ordinances, and regulations. PHI Administration directs the development of goals, policies, and procedures, and establishes quality assurance activities to monitor PHI Practice activities. They determine the effectiveness of PHI Practice interventions through the data collection and analysis of quality assurance reports. PHI Administration responds to changes in the public health laws, regulations, and DPH policy by developing requisite changes to the scope of PHI Practice and interventions.

PHI Administration also serves as the designated Custodian of Records in response to subpoenas duces tecum, court orders, and Public Records Act requests for public health records.

1.5 Tuberculosis Control Program (TBCP)

The Tuberculosis Control Program (TBCP) is the lead program in the Department of Public Health (DPH) responsible for the prevention and control of tuberculosis. The TBCP is supported through funding provided by the: California Department of Public Health, the U.S. Centers for Disease Control and Prevention (CDC), and Los Angeles County (LAC). The TBCP has a multi-disciplinary team consisting of physicians, public health nurses, health educators, epidemiologists, program managers, CDC Field Assignees, and administrative support personnel.

The TBCP partners with County and community health care providers to: ensure the timely reporting and treatment of TB disease and TB infection, provide expert advice and technical assistance, promote the use of the latest diagnostic technologies and therapeutics, and increase awareness about strategies to improve TB prevention and control efforts in LAC. The TBCP's main responsibilities can be organized under the core public health functions of assessment, policy development, and assurance.

1.6 Veterinary Public Health (VPH) Program

The Veterinary Public Health program (VPH) is an integral part of the Los Angeles County Department of Public Health. VPH works at the intersection of human and animal health to promote a healthy community environment for residents of Los Angeles County. Jurisdiction includes all of Los Angeles County, except the cities of Long Beach, Vernon and Pasadena.

VPH is staffed by veterinarians, animal sanitation inspectors, registered veterinary technicians (RVT), health educator, epidemiology analyst, and administrative staff.

VPH is responsible for:

- Animal disease surveillance (including zoonoses) and outbreak investigations
- Animal bite reporting and rabies control activities
- Animal import inspections
- Healthy Pets Healthy Families initiative
- Collaboration with non-profits to provide preventive veterinary medicine to underserved communities
- Public outreach and education

**ATTACHMENT B.2
DELIVERABLE EXPECTATION DOCUMENT**

Deliverable Expectation Document	
Project Deliverable Number:	Title of Deliverable:
Deliverable Description:	Contract/SOW Reference:
Frequency:	Submission Date:
Review Date:	Final Submission Due Date:
County Approval:	Distribution: (i.e., County's Project Director, County's Project Manager, County Subject Matter Experts, etc.)
Contractor: Complete shaded area below	
Detailed Deliverable Outline: Objective: Participants: Contractor Key Employees County Key Employees Contractor Responsibilities: County Responsibilities:	
Deliverable Acceptance Criteria (include agreed upon requirements, format and contents, related to Deliverable):	
Prepared By (please print):	Date Submitted:
Phone Number:	E-mail:
Contractor's Project Director or Contractor's Project Manager Approval:	
Contractor Representative Name:	Contractor Representative Position:
Contractor Representative Signature:	Date:
County Approval/Comments	
Approved By:	Date:
Signature:	

**ATTACHMENT B.2
DELIVERABLE EXPECTATION DOCUMENT**

Comments:

KEY DATES RELATED TO DELIVERABLE

KEY ACTIVITY	DUE DATE	COMMENT
Submission of DED by Contractor		
Approval of DED by Contractor and County		
Submission of Completed Deliverable to County		
Presentation of Deliverable to County (if necessary or requested by County's Project Director)		
Review of Completed Deliverable by Contractor and County		
Resolution of County Comments and Submission of Revised Deliverable (if necessary)		
Review of Revised Deliverable by County (if necessary)		
Resolution of County Comments (if necessary)		
Approval of Deliverable by County		

EXHIBIT C

SCHEDULE OF PRICING AND PAYMENTS

SUMMARY – MAXIMUM CONTRACT SUM FOR TERM

Reference Attachment No.	Description	Amount
C.1	Term Years 1-7 Amounts	\$2,946,056
C.2	Aggregate Tasks and Deliverables (Exhibit B (Statement of Work)Tasks and Deliverables 1-26)	\$3,210,960
C.3	Aggregate Maintenance Fees (Exhibit B (Statement of Work) Task and Deliverable 27), Ongoing License Fees, and Subscription Fees	\$1,794,152
C.4	Aggregate Support Fees (Exhibit B (Statement of Work) Task and Deliverable 28)	\$719,815
C.5	Aggregate Hosting Fees (Exhibit B (Statement of Work) Task and Deliverable 29)	\$2,893,490
C.6	Aggregate Provide As-Needed Additional Work Dollars Under Exhibit B (Statement of Work) Task and Deliverable 30)	\$2,832,000
	Maximum Contract Sum for Term (May 10, 2011– May 9, 2026)	\$14,396,473

ATTACHMENT C.1
TERM YEARS 1-7 AMOUNTS

ITEM	TOTAL
Negotiated Aggregate Maintenance Fees Term Years 1-7	\$280,400
Aggregate Annual Support Fees Term Years 1-7	\$595,850
Aggregate Annual Hosting Fees Term Years 1-7	\$1,486,120
Aggregate Pool Dollars Term Years 1-7	\$1,212,667
Aggregate Credit	(\$816,676)
Prior Change Orders	\$187,695
Grand Total:	\$2,946,056

**ATTACHMENT C.2
TASK AND DELIVERABLE DETAIL
(EXHIBIT B (STATEMENT OF WORK) TASKS AND DELIVERABLES 1-26)**

Project Management Key Deliverables

Milestone Name	Total	Key Deliverables	Per Month (3 Years)
Completion of Project Initiation	\$260,000	Deliverable 1.1. Kick Off Meeting	\$7,222
		Deliverable 1.2 Project Charter	
		Deliverable 2.1 Ongoing Project Management, Status Reports and Meetings	
		Deliverable 2.2 Steering Committee Reports and Conduct Steering Committee Meetings	
		Deliverable 20.1 Finalized Project Close-out Checklist	
Subtotal	\$260,000	Deliverable 20.2 Completed Project Close-out Activities	

**ATTACHMENT C.2
TASK AND DELIVERABLE DETAIL
(EXHIBIT B (STATEMENT OF WORK) TASKS AND DELIVERABLES 1-26)**

Upgraded System Key Deliverables

Milestone Name	Milestone Allocation	Allocation Amount	Key Deliverables	Total by Deliverable
Complete Design		\$376,530	Deliverable 4.1 Amazon Web Services Migration Plan	\$30,217
			Deliverable 4.2 Certified Results of Validation of High Availability AWS Option	\$24,000 ¹
			Deliverable 4.6 Updated Disaster Recovery Plan and Assessments for the Upgraded System	\$30,217
			Deliverable 5.2 Final System Design Specifications	
			<i>7 Programs at \$4,317 (each)</i>	\$30,217
			Deliverable 7.2 Final Dashboard Design Specifications	
			<i>7 Programs at \$4,317 (each)</i>	\$30,217
			Deliverable 8.2 Final Specified Baseline Interface Design Specifications	\$35,253
			Deliverable 9.2 Final Other Baseline Design Modification Design Specifications	\$105,759
			Deliverable 13.1 Data Conversion and Migration Plan	
<i>4 Systems at \$7,554 (each)</i>	\$30,217			
Deliverable 14.1 Validated Integration Approach for Authentication	\$30,217			
Deliverable 15.1 System Security Plan	\$30,217			

¹ Amount shown is the not-to-exceed amount for Deliverable 4.2 (Certified Results of Validation of High Availability AWS Option) of Exhibit B (Statement of Work). It represents up to three (3) months of operation of the test System Environment described in the corresponding Subtask 4.2 (Validation of High Availability AWS Option) Notwithstanding anything to the contrary contained in this Attachment C.2, Contractor shall only be permitted to invoice in accordance with the Agreement for the number of months (or portion thereof) for which the test System Environment was actually in operation, up to three (3) months (e.g., if the Work under Subtask 4.2 (Validation of High Availability AWS Option) only required the test System Environment to be in operation for 1.5 months, then Contractor shall only be permitted to invoice for \$16,000, but if the Work required the test System Environment to be in operation for four (4) months, Contractor shall only be permitted to invoice for \$24,000).

**ATTACHMENT C.2
TASK AND DELIVERABLE DETAIL
(EXHIBIT B (STATEMENT OF WORK) TASKS AND DELIVERABLES 1-26)**

Milestone Name	Milestone Allocation	Allocation Amount	Key Deliverables	Total by Deliverable
Complete Build and Test	39%	\$470,040	Deliverable 6.1 Completed System Build and Configuration for each DPH Program	
			<i>7 Programs at \$8,394 (each)</i>	\$58,755
			Deliverable 7.3 Complete Dashboards for Each DPH Program	
			<i>7 Programs at \$13,430 (each)</i>	\$94,008
			Deliverable 9.3 Completed Other Baseline Modifications for Upgraded System	\$141,012
			Deliverable 11.1 Certification of Testing of Upgraded System	\$58,755
			Deliverable 12.2 Completed User Acceptance Test	\$58,755
			Deliverable 13.3 Complete Data Conversion and Migration for Each Additional DPH Program	
			<i>4 Systems at \$14,689 (each)</i>	\$58,755

**ATTACHMENT C.2
TASK AND DELIVERABLE DETAIL
(EXHIBIT B (STATEMENT OF WORK) TASKS AND DELIVERABLES 1-26)**

Milestone Name	Milestone Allocation	Allocation Amount	Key Deliverables	Total by Deliverable
Productive Use	10%	\$117,510	Deliverable 4.5 Implemented Amazon Web Services Infrastructure for Upgraded System	\$47,004
			Deliverable 8.5 Implemented Specified Baseline Interfaces in Production	\$23,502
			Deliverable 14.4 Implemented Authentication Integration in Production	\$23,502
			Deliverable 17.1 System Cutover to Production Use for Each DPH Program	\$23,502
			<i>7 Programs at \$3,357 (each)</i>	\$23,502
			Deliverable 18.1 DPH Program Acceptance of Upgraded System Certificate	
			<i>7 Programs at \$16,787 (each)</i>	\$117,510
			Deliverable 19.1 System Acceptance for Upgraded System Certificate	\$94,008
Final Acceptance	20%	\$235,020	Deliverable 22.6 Acceptance of CalREDIE Baseline Interface	\$23,502
Subtotal		100%	\$1,199,100	

**ATTACHMENT C.2
TASK AND DELIVERABLE DETAIL
(EXHIBIT B (STATEMENT OF WORK) TASKS AND DELIVERABLES 1-26)**

Reports Key Deliverables				
Milestone Name	Milestone Allocation	Allocation Amount	Key Deliverables	Total Not to Exceed Amount by Deliverable
Complete Design	30%	\$73,500	Deliverable 21.2 Final Report Design Specifications	\$73,500
			<i>7 Programs at \$10,500 (each)</i>	
Productive Use	50%	\$122,500	Deliverable 21.5 Implemented Reports in Production for Each DPH Program	\$122,500
			<i>7 Programs at \$17,500 (each)</i>	
Final Acceptance	20%	\$49,000	Deliverable 21.6 Acceptance of Reports for Each DPH Program	\$49,000
			<i>7 Programs at \$7,000 (each)</i>	
Subtotal		100%	\$245,000	

**ATTACHMENT C.2
TASK AND DELIVERABLE DETAIL
(EXHIBIT B (STATEMENT OF WORK) TASKS AND DELIVERABLES 1-26)**

ORCHID Key Deliverables

Milestone Name	Milestone Allocation	Allocation Amount	Key Deliverables	Total Not to Exceed Amount by Deliverable
Complete Design	30%	\$60,000	Deliverable 23.2 Final ORCHID Baseline Interface Design Specifications	\$60,000
Complete Build and Test	40%	\$80,000	Deliverable 23.3 Completed ORCHID Baseline Interface	\$40,000
			Deliverable 23.4 Complete ORCHID Baseline Interface Tests	\$40,000
Productive Use	10%	\$20,000	Deliverable 23.5 Implemented ORCHID Baseline Interface in Production	\$20,000
Final Acceptance	20%	\$40,000	Deliverable 23.6 Acceptance of ORCHID Baseline Interface	\$40,000
Subtotal	100%	\$200,000		

**ATTACHMENT C.2
TASK AND DELIVERABLE DETAIL
(EXHIBIT B (STATEMENT OF WORK) TASKS AND DELIVERABLES 1-26)**

Physician Portal Application

Milestone Name	Milestone Allocation	Allocation Amount	Key Deliverable	Total by Deliverable
Physician Portal Application	30%	\$57,181	Deliverable 24.1 Validated Physician Portal Application Requirements and Final Specifications	\$57,181
	50%	\$95,302	Deliverable 24.2 Completion of Configuration and Test of Physician Portal Application	\$95,302
	20%	\$38,121	Deliverable 24.3 Implementation and Acceptance of Physician Portal Application	\$38,121
Subtotal	100%	\$190,604		

EHR Gateway Application

Milestone Name	Milestone Allocation	Allocation Amount	Key Deliverable	Total by Deliverable
EHR Gateway Application	100%	\$206,256	Deliverable 25.3 Implementation and Acceptance of EHR Gateway Application	\$206,256
Subtotal		\$206,256		

**ATTACHMENT C.2
TASK AND DELIVERABLE DETAIL
(EXHIBIT B (STATEMENT OF WORK) TASKS AND DELIVERABLES 1-26)**

User Defined Forms Key Deliverables

Milestone Name	Milestone Allocation	Allocation Amount	Key Deliverables	Total Not To Exceed Amount by Deliverable
Complete Design	30%	\$264,000	Deliverable 26.2 Final UDF Design Specifications	\$264,000
			<i>7 Programs at \$37,714 (each)</i>	
Productive Use	50%	\$440,000	Deliverable 26.5 Implemented UDFs in Production for Each DPH Program	\$440,000
			<i>7 Programs at \$62,857 (each)</i>	
Final Acceptance	20%	\$176,000	Deliverable 26.6 Acceptance of UDFs for Each DPH Program	\$176,000
			<i>2 Programs at \$25,143 (each)</i>	
Subtotal		100%	\$880,000	

² Contractor may submit an invoice for Deliverable 26.6 (Acceptance of UDFs for Each DPH Program) of the Statement of Work only at such time as Contractor is able to submit an invoice for Deliverable 19.1 (System Acceptance of Upgraded System Certificate) of the Statement of Work in accordance with the terms of the Agreement.

C-10

COUNTY OF LOS ANGELES
ATLAS DEVELOPMENT CORPORATION
SOFTWARE AND SERVICES AGREEMENT
EXHIBIT C (SCHEDULE OF PRICING AND PAYMENTS)

**ATTACHMENT C.2
TASK AND DELIVERABLE DETAIL
(EXHIBIT B (STATEMENT OF WORK) TASKS AND DELIVERABLES 1-26)**

Option B Migration to High Availability Infrastructure Key Deliverables³

Milestone Name	Milestone Allocation	Allocation Amount	Key Deliverables	Total by Deliverable
Complete Design	30%	\$9,000	Deliverable 4.7 Updated Migration Plan for High Availability	\$9,000
			Deliverable 4.12 Updated Disaster Recovery Plan and Assessments for System in High Availability	
Productive Use	50%	\$15,000	Deliverable 4.10 Implemented High Availability Infrastructure for System	\$15,000
Final Acceptance	20%	\$6,000	Deliverable 4.11 Acceptance of High Availability Infrastructure for System	\$6,000
Subtotal		100%	\$30,000	
Grand Total			\$3,210,960	

³ Applicable only if Option B is elected by County under Subtask 4.2 (Validation of High Availability AWS Option) of Exhibit B (Statement of Work) AND County issues a written notice to proceed with respect to migration of the then-current System to High Availability under Subtask 4.7 (Prepare for Migration of System to High Availability) of Exhibit B.

**ATTACHMENT C.3
 MAINTENANCE FEES, ONGOING LICENSE FEES, AND SUBSCRIPTION FEES DETAIL
 EXHIBIT B (STATEMENT OF WORK) TASK AND DELIVERABLE 27; PARAGRAPH 10.3 OF BASE AGREEMENT**

MAINTENANCE FEES - EHR GATEWAY APPLICATION

	Term	Term	Term	Term	Term	Term	Term	Term	Term	Term	Term	Term	Term	Subtotal
	Year 8	Year 9	Year 10	Year 11	Year 12	Year 13	Year 14	Year 15						
Quarterly Maintenance Fee Payment – EHR Gateway Application ⁴	\$10,138	\$10,138	\$10,138	\$10,138	\$10,138	\$10,138	\$10,138	\$10,138	\$10,138	\$10,138	\$10,138	\$10,138	\$10,138	
Aggregate Annual Maintenance Fees – EHR Gateway Application	\$40,551	\$40,551	\$40,551	\$40,551	\$40,551	\$40,551	\$40,551	\$40,551	\$40,551	\$40,551	\$40,551	\$40,551	\$40,551	\$324,410

⁴ Notwithstanding anything to the contrary in this Attachment C.3, County's obligation to pay Maintenance Fees in exchange for Contractor's performance of Maintenance Services with respect to the EHR Gateway Application commences with the first quarter following County's approval in accordance with the Agreement of Deliverable 25.3 (Implementation and Acceptance of EHR Gateway Application) of the Statement of Work.

**ATTACHMENT C.3
 MAINTENANCE FEES, ONGOING LICENSE FEES, AND SUBSCRIPTION FEES DETAIL
 EXHIBIT B (STATEMENT OF WORK) TASK AND DELIVERABLE 27; PARAGRAPH 10.3 OF BASE AGREEMENT**

MAINTENANCE FEES – SYNDROMIC SURVEILLANCE - 3 CONNECTIONS

	Term Year 8	Term Year 9	Term Year 10	Term Year 11	Term Year 12	Term Year 13	Term Year 14	Term Year 15	Subtotal
Quarterly Maintenance Fee Payment – Syndromic Surveillance ⁵	\$878	\$878	\$878	\$878	\$878	\$878	\$878	\$878	
Aggregate Annual Maintenance Fees – Syndromic Surveillance	\$3,510	\$3,510	\$3,510	\$3,510	\$3,510	\$3,510	\$3,510	\$3,510	\$28,080

⁵ Notwithstanding anything to the contrary in this Attachment C.3, County's obligation to pay Maintenance Fees in exchange for Contractor's performance of Maintenance Services with respect to the three (3) Syndromic Surveillance connections commences with the first quarter following County's approval in accordance with the Agreement of Deliverable 19.1 (System Acceptance of the Upgraded System Certificate) of the Statement of Work. Additionally, pricing shown in this table is for three (3) connections; pricing for each additional connection beyond three (3) connections is set forth in Attachment C.7 (Optional Pricing). Price increase or decrease to be implemented in accordance with Paragraph 10.3 (Maintenance Fees; License and Subscription Fees; Additional Concurrent Users, Connections, or Transactions) of the Base Agreement.

**ATTACHMENT C.3
 MAINTENANCE FEES, ONGOING LICENSE FEES, AND SUBSCRIPTION FEES DETAIL
 EXHIBIT B (STATEMENT OF WORK) TASK AND DELIVERABLE 27; PARAGRAPH 10.3 OF BASE AGREEMENT**

MAINTENANCE FEES – ELR GATEWAY APPLICATIONS - 4 CONNECTIONS

	Term Year 8	Term Year 9	Term Year 10	Term Year 11	Term Year 12	Term Year 13	Term Year 14	Term Year 15	Subtotal
Quarterly Maintenance Fee Payment – ELR Gateway Application ⁶	\$3,000	\$3,000	\$3,000	\$3,000	\$3,000	\$3,000	\$3,000	\$3,000	
Aggregate Annual Maintenance Fees – ELR Gateway Application	\$12,000	\$12,000	\$12,000	\$12,000	\$12,000	\$12,000	\$12,000	\$12,000	\$96,000

⁶ Pricing shown in this table is for up to four (4) ELR Gateway Application direct Lab connections. As of the Amendment 11 Effective Date, however, there are only two (2) active ELR Gateway Application direct Lab connections. Notwithstanding anything to the contrary in this Attachment C.3, County's obligation to pay Maintenance Fees in exchange for Contractor's performance of Maintenance Services with respect to the third and fourth ELR Gateway Application direct Lab connections (\$3,000 annual Maintenance Fees per connection) commences with the first quarter following County's approval in accordance with the Agreement of all Work under the applicable Change Order(s) adding such connections. For the avoidance of doubt, no such Change Order has yet been entered into by the Parties with respect to such connections and any such Change Order must be entered into in accordance with the Agreement. Additionally, pricing shown in this table is for up to 23 direct Lab connections; pricing for each additional direct Lab connection beyond 23 direct Lab connections is set forth in Attachment C.7 (Optional Pricing). Price increase or decrease to be implemented in accordance with Paragraph 10.3 (Maintenance Fees; License and Subscription Fees; Additional Concurrent Users, Connections, or Transactions) of the Base Agreement.

**ATTACHMENT C.3
 MAINTENANCE FEES, ONGOING LICENSE FEES, AND SUBSCRIPTION FEES DETAIL
 EXHIBIT B (STATEMENT OF WORK) TASK AND DELIVERABLE 27; PARAGRAPH 10.3 OF BASE AGREEMENT**

MAINTENANCE FEES – ALL OTHER SYSTEM SOFTWARE

	Term Year 8	Term Year 9	Term Year 10	Term Year 11	Term Year 12	Term Year 13	Term Year 14	Term Year 15	Subtotal
Negotiated Quarterly Maintenance Fee Payment – Other System Software ^{7 8}	\$10,000	\$10,000	\$10,000	\$35,830	\$36,904	\$38,012	\$39,152	\$40,326	
Negotiated Aggregate Annual Maintenance Fees – Other System Software	\$40,000	\$40,000	\$40,000	\$143,318	\$147,618	\$152,046	\$156,607	\$161,306	\$880,895

⁷ Maintenance Fees for Term Years 8, 9, and 10 are at a negotiated discount rate.

⁸ Pricing shown in this table is for up to the number Concurrent Users for the specific WorldCare Suite modules as identified on Attachment C.7 (Optional Pricing). All other WorldCare Suite modules are for unlimited Concurrent Users. Pricing for additional Concurrent Users beyond the number identified on Attachment C.7 is as set forth on Attachment C.7. Price increase or decrease to be implemented in accordance with Paragraph 10.3 (Maintenance Fees; License and Subscription Fees; Additional Concurrent Users, Connections, or Transactions) of the Base Agreement.

**ATTACHMENT C.3
 MAINTENANCE FEES, ONGOING LICENSE FEES, AND SUBSCRIPTION FEES DETAIL
 EXHIBIT B (STATEMENT OF WORK) TASK AND DELIVERABLE 27; PARAGRAPH 10.3 OF BASE AGREEMENT**

ONGOING LICENSE FEES - PHYSICIAN PORTAL APPLICATION

	Term Year 8	Term Year 9	Term Year 10	Term Year 11	Term Year 12	Term Year 13	Term Year 14	Term Year 15	Subtotal
Quarterly Ongoing License Fee Payment – Physician Portal Application ⁹	\$5,899	\$5,899	\$5,899	\$5,899	\$5,899	\$5,899	\$5,899	\$5,899	
Aggregate Annual Ongoing License Fees – Physician Portal Application	\$23,596	\$23,596	\$23,596	\$23,596	\$23,596	\$23,596	\$23,596	\$23,596	\$188,768

⁹ Notwithstanding anything to the contrary in this Attachment C.3, County's obligation to pay ongoing License Fees for the Physician Portal Application commences with the first quarter following County's approval in accordance with the Agreement of Deliverable 24.3 (Implementation and Acceptance of Physician Portal Application) or, if County elects to move Task 24 to occur prior to System Acceptance for the Upgraded System pursuant to Section II.H.III of the Statement of Work, Deliverable 19.1 (System Acceptance of the Upgraded System Certificate) of the Statement of Work.

**ATTACHMENT C.3
 MAINTENANCE FEES, ONGOING LICENSE FEES, AND SUBSCRIPTION FEES DETAIL
 EXHIBIT B (STATEMENT OF WORK) TASK AND DELIVERABLE 27: PARAGRAPH 10.3 OF BASE AGREEMENT**

SUBSCRIPTION FEES – PHYSICIAN PORTAL APPLICATION

	Term	Term	Term	Term	Term	Term	Term	Term	Term	Term	Term	Subtotal
	Year 8	Year 9	Year 10	Year 11	Year 12	Year 13	Year 14	Year 15				
Quarterly Subscription Fee Payment – Physician Portal Application ¹⁰	\$8,625	\$8,625	\$8,625	\$8,625	\$8,625	\$8,625	\$8,625	\$8,625	\$8,625	\$8,625	\$8,625	
Aggregate Annual Ongoing Subscription Fees – Physician Portal Application	\$34,500	\$34,500	\$34,500	\$34,500	\$34,500	\$34,500	\$34,500	\$34,500	\$34,500	\$34,500	\$34,500	\$276,000
Grand Total											\$1,794,152	

¹⁰ Notwithstanding anything to the contrary in this Attachment C.3, County’s obligation to pay Subscription Fees for the Physician Portal Application commences with the first quarter following County’s approval in accordance with the Agreement of Deliverable 24.3 (Implementation and Acceptance of Physician Portal Application) or, if County elects to move Task 24 to occur prior to System Acceptance for the Upgraded System pursuant to Section II.H.III of the Statement of Work, Deliverable 19.1 (System Acceptance of the Upgraded System Certificate) of the Statement of Work. Additionally, pricing shown in this table is for up to 3000 Transactions per calendar month; pricing for additional Transactions beyond 3000 Transactions is shown in Attachment C.7 (Optional Pricing). Price increase or decrease to be implemented in accordance with Paragraph 10.3 (Maintenance Fees; License and Subscription Fees; Additional Concurrent Users, Connections, or Transactions) of the Base Agreement.

**ATTACHMENT C.4
SUPPORT FEES DETAIL
EXHIBIT B (STATEMENT OF WORK) TASK AND DELIVERABLE 28**

	Term Year 8	Term Year 9	Term Year 10	Term Year 11	Term Year 12	Term Year 13	Term Year 14	Term Year 15	Grand Total
Quarterly Support Fee Payment	\$21,250	\$21,250	\$21,250	\$21,888	\$22,544	\$23,220	\$23,917	\$24,635	
Aggregate Annual Support Fees	\$85,000	\$85,000	\$85,000	\$87,550	\$90,176	\$92,882	\$95,668	\$98,538	\$719,815

**ATTACHMENT C.5
HOSTING FEES DETAIL
EXHIBIT B (STATEMENT OF WORK) TASK AND DELIVERABLE 29**

HOSTING FEES – PHYSICIAN PORTAL

	Term	Term	Term	Term	Term	Term	Term	Term	Term	Term	Subtotal
Quarterly Hosting Fee Payment – Physician Portal Application ¹¹	Year 8	Year 9	Year 10	Year 11	Year 12	Year 13	Year 14	Year 15			
	\$3,885	\$3,885	\$3,885	\$3,885	\$3,885	\$3,885	\$3,885	\$3,885			
Aggregate Annual Hosting Fees – Physician Portal Application	\$15,540	\$15,540	\$15,540	\$15,540	\$15,540	\$15,540	\$15,540	\$15,540			\$124,320

¹¹ Notwithstanding anything to the contrary in this Attachment C.5, County's obligation to pay Hosting Fees in exchange for Contractor's performance of Hosting Services with respect to the Physician Portal Application commences with the first quarter following County's approval in accordance with the Agreement of Deliverable 24.3 (Implementation and Acceptance of Physician Portal Application) or, if County elects to move Task 24 (Physician Portal Application) to occur prior to System Acceptance for the Upgraded System pursuant to Section II.H.III of the Statement of Work, Deliverable 19.1 (System Acceptance of the Upgraded System Certificate) of the Statement of Work.

**ATTACHMENT C.5
HOSTING FEES DETAIL
EXHIBIT B (STATEMENT OF WORK) TASK AND DELIVERABLE 29**

HOSTING FEES – ALL OTHER SYSTEM SOFTWARE BASE AMOUNT

	Term Year 8	Term Year 9	Term Year 10	Term Year 11	Term Year 12	Term Year 13	Term Year 14	Term Year 15	Subtotal
Quarterly Base Hosting Fee Payment ¹²	\$53,000	\$53,000	\$53,000	\$54,590	\$56,228	\$57,915	\$59,652	\$61,442	
Aggregate Annual Base Hosting Fees	\$212,000	\$212,000	\$212,000	\$218,360	\$224,911	\$231,658	\$238,608	\$245,766	\$1,795,303

¹²The pricing shown in this table assumes that the System Environments will be migrated during Task 4 to Amazon Web Services GovCloud infrastructure. If the County exercises the option under Subtask 4.1 (Prepare Plan for Migration of Upgraded System to Amazon Web Services Infrastructure) for the System Environments to be migrated to the Amazon Web Services commercial cloud infrastructure, then notwithstanding anything to the contrary in this Attachment C.5: (a) if County elects to migrate to Disaster Recovery only infrastructure, then at such time as the fees set forth in the table entitled "Hosting Fees – All Other System Software Disaster Recovery Only Option" become payable to Contractor, County's Quarterly Base Hosting Fee Payment shall become \$51,500 (and accordingly County's Aggregate Annual Base Hosting Fees shall be \$206,000); and (b) if and at such time as County determines to proceed with a High Availability Infrastructure as well, then at such time as the fees set forth in the table entitled "Hosting Fees – All Other System Software High Availability Option" become payable to Contractor, County's Quarterly Base Hosting Fee Payment shall become \$50,000 (and accordingly County's Aggregate Annual Base Hosting Fees shall be \$200,000).

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**ATTACHMENT C.5
HOSTING FEES DETAIL
EXHIBIT B (STATEMENT OF WORK) TASK AND DELIVERABLE 29**

HOSTING FEES – ALL OTHER SYSTEM SOFTWARE DISASTER RECOVERY ONLY OPTION										
	Term	Term	Term	Term	Term	Term	Term	Term	Term	Term
	Year 8	Year 9	Year 10	Year 11	Year 12	Year 13	Year 14	Year 15	Subtotal	
Additional Quarterly Hosting Fee Payment ¹³	\$3,750	\$3,750	\$3,750	\$3,863	\$3,978	\$4,098	\$4,221	\$4,347		
Aggregate Additional Annual Hosting Fees	\$15,000	\$15,000	\$15,000	\$15,450	\$15,914	\$16,391	\$16,883	\$17,389	\$127,026	

¹³ Notwithstanding anything to the contrary in this Attachment C.5, the fees set forth in this table shall not be payable to Contractor in addition to the fees set forth in the table entitled "Hosting Fees – All Other System Software Base Amount" until the first quarter following County's approval in accordance with the Agreement of all of Deliverables 4.1-4.6 under Task 4 (Migration to System Environments in Amazon Web Services Infrastructure) of the Statement of Work. Additionally, the pricing shown in this table assumes the System Environments will be migrated during Task 4 to Disaster Recovery Infrastructure only. If and at such time as County determines to proceed with a High Availability Infrastructure as well, then the additional Hosting Fees describe in the table entitled "Hosting Fees – All Other System Software High Availability" will apply as well as described in Footnote 14 below.

**ATTACHMENT C.5
HOSTING FEES DETAIL
EXHIBIT B (STATEMENT OF WORK) TASK AND DELIVERABLE 29**

HOSTING FEES – ALL OTHER SYSTEM SOFTWARE HIGH AVAILABILITY OPTION

	Term	Term	Term	Term	Term	Term	Term	Term	Term	Term	Term	
	Year 8	Year 9	Year 10	Year 11	Year 12	Year 13	Year 14	Year 15	Year 15	Year 15	Year 15	Subtotal
Additional Quarterly Hosting Fee Payment ¹⁴	\$25,000	\$25,000	\$25,000	\$25,750	\$26,523	\$27,318	\$28,138	\$28,982				
Aggregate Additional Annual Hosting Fees	\$100,000	\$100,000	\$100,000	\$103,000	\$106,090	\$109,273	\$112,551	\$115,927				\$846,841

Grand Total \$2,893,490

¹⁴ The additional Hosting Fees shown in this table apply only if (and at such time as) County determines to proceed with the AWS Option consisting of high availability and Disaster Recovery architecture as described in Subtask 4.2 (Validation of High Availability AWS Option) of Exhibit B (Statement of Work). If County determines to proceed with Option A described in such Subtask, the additional Hosting Fees would apply at such time as the Hosting Fees associated with Disaster Recovery infrastructure only apply as described in Footnote 13 above to the table entitled "Hosting Fees – All Other System Software High Availability." If County determines to proceed with Option B as described in Subtask 4.2 (Validation of High Availability AWS Option), these additional Hosting Fees would apply the first quarter following County's approval in accordance with the Agreement of all of optional Deliverables 4.7-4.12 under Task 4 (Migration to System Environments in Amazon Web Services Infrastructure) of the Statement of Work.

ATTACHMENT C.6

ADDITIONAL WORK DOLLARS DETAIL

POOL DOLLARS BY YEAR

EXHIBIT B (STATEMENT OF WORK) TASK AND DELIVERABLE 30

	Term Year 8	Term Year 9	Term Year 10	Term Year 11	Term Year 12	Term Year 13	Term Year 14	Term Year 15	Subtotal
Additional eICR Dollars	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$400,000
Additional ELR Dollars	\$150,000	\$150,000	\$150,000	\$150,000	\$150,000	\$150,000	\$150,000	\$150,000	\$1,200,000
Additional Syndromic Surveillance Dollars	\$54,000	\$54,000	\$54,000	\$54,000	\$54,000	\$54,000	\$54,000	\$54,000	\$432,000
Pool Dollars for All Other Additional Work	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000	\$800,000
Grand Total	\$2,832,000								

**ATTACHMENT C.7
OPTIONAL PRICING
PARAGRAPHS 10.3 AND 10.6 OF BASE AGREEMENT**

ONE-TIME LICENSE/ONGOING MAINTENANCE FEE INCREASE DURING TERM ¹⁵

Module	User/Lab Increase	One-Time License Fee	Annual Maintenance Fee Increase
Community Reporting Module	For every 10 Physician/Infection Preventionist Concurrent User Licenses beyond 500 Concurrent User Licenses	\$17,000	\$3,400
Manual Lab Reporting Module	For every 10 additional Lab-based Manual Reporting Concurrent User Licenses beyond 30 Lab-based Concurrent User Licenses	N/A	\$1,814
LabAware	For every server License enabling up to 10 Lab connections beyond 50 Lab connections	N/A	\$7,254
ELR Gateway Application	For every additional ELR Gateway Kit per direct Lab connection beyond 23 direct Lab connections For each Lab beyond the aforementioned 23, a per Lab license fee of \$15,000 will also be charged for each instance of the ELR Gateway	\$15,000	\$3,000
All Other WorldCare Suite Modules	For every 10 Disease Prevention and Control Staff Concurrent User Licenses beyond 300 Concurrent User Licenses. ¹⁶	\$17,000	\$3,400
Syndromic Surveillance Interface	For each additional Syndromic Surveillance connection beyond 3 Syndromic Surveillance connections	\$5,850	\$1,170

¹⁵ Price increase or decrease to be implemented in accordance with Paragraph 10.3 (Maintenance Fees; License and Subscription Fees; Additional Concurrent Users, Connections, or Transactions) of the Base Agreement.

¹⁶ Should County purchase more than 200 additional Concurrent User Licenses (for a total of more than 500 Concurrent User Licenses), additional Hosting Fees may be negotiated between the Parties and added to the Schedule of Pricing and Payments in accordance with the Agreement.

**ATTACHMENT C.7
OPTIONAL PRICING**

SUBSCRIPTION FEE INCREASE DURING TERM ¹⁷

Module	Transaction Increase	Monthly Subscription Fee Increase
Physician Portal Application	For Transactions ranging from 3,001 to 4,000 Transactions in a calendar month	\$3,450
	For Transactions ranging from 4,001 to 5,000 Transactions in a calendar month	\$3,995
	For Transactions ranging from 5,001 to 7,500 Transactions in a calendar month	\$4,895
	For Transactions ranging from 7,501 to 10,000 Transactions in a calendar month	\$5,665
	For Transactions ranging from 10,001 and above Transactions in a calendar month	\$6,895

¹⁷ Price increase or decrease to be implemented in accordance with Paragraph 10.3 (Maintenance Fees; License and Subscription Fees; Additional Concurrent Users, Connections, or Transactions) of the Base Agreement.

**ATTACHMENT C.7
OPTIONAL PRICING**

HOURLY LABOR RATES

Year	Hourly Labor Rate
Years 8-10 of Term	\$175/hour
Years 11-15 of Term	\$195/hour

EXHIBIT D DESCRIPTION OF SYSTEM SOFTWARE

Exhibit D (Description of System Software), together with its Attachments, is attached to Software and Services Agreement, County Agreement No. PH-001629, dated as of May 10, 2011 (together with all Exhibits and Attachments, all as amended in accordance with the terms thereof, the "Agreement"), by and between the County of Los Angeles, for its Department of Public Health ("County"), and Atlas Database Software Corp. d/b/a Atlas Development Corporation ("Contractor"), as amended by that certain Amendment Number 11 dated as of _____, 2018. Capitalized terms used in this Exhibit D without definition have the meanings given to such terms in the Agreement.

This Exhibit D, together with its Attachments, as supplemented and amended as provided for in the Statement of Work (and/or otherwise in the Agreement) as a part of Work, provides a general description of the System Software.

- Attachment D.1 (System Requirements for Upgraded System) to this Exhibit D describes System Requirements and Specifications being implemented under applicable of Tasks 1-26 of Exhibit B (Statement of Work) as part of the expansion of IRIS (referred to as Upgraded System).
- Attachment D.2 (System Definitions) to this Exhibit D provides a chart of the System definitions.
- Attachment D.3 (List of Reports) to this Exhibit D provides a list of Baseline Modifications consisting of reports to be developed for the applicable DPH Programs under Exhibit B (Statement of Work) as a part of the Upgraded System.
- Attachment D.4 (List of Dashboards) to this Exhibit D provides a list of Baseline Modifications consisting of dashboards to be developed for the applicable DPH Programs under Exhibit B (Statement of Work) as a part of the Upgraded System.
- Attachment D.5 (Baseline Interface Requirements) to this Exhibit D describes Baseline Interfaces being implemented under Exhibit B (Statement of Work) as a part of the Upgraded System.
- Attachment D.6 (List of Other Baseline Modifications for Upgraded System) to this Exhibit D describes Baseline Modifications being implemented under Exhibit B (Statement of Work) as a part of the Upgraded System.
- Attachment D.7 (Design Specifications for CalREDIE Interface) sets forth the current version, as of the Amendment 11 Effective Date, of the standards for an Interface with the California Department of Public Health's CalREDIE system.
- Attachment D.8 (Design Specifications for the ORCHID Interface) sets forth the current version, as of the Amendment 11 Effective Date, of the design specifications for the Interface with the County's ORCHID system.

- Attachment D.9 (List of User Defined Forms) sets forth the list, as of the Amendment 11 Effective Date, of the User defined forms (UDFs) which are subject to requirements gathering and validation under Task 26 of the Statement of Work.

The IssueTrak numbers referred to in the Attachments to this Exhibit D contain additional System Requirements and Specifications as indicated. Contractor's Documentation for the System Software also contains additional Specifications.

GENERAL DESCRIPTION:

The IRIS is a secure web-enabled electronic reporting system for communicable diseases, the core functionality of which includes the ability to:

- Capture disease, outbreak, and Foodborne Illness reports
- Accept and parse electronic lab result to appropriate disease control program
- Support basic workflow of evaluating cases and outbreaks and assigning them to the appropriate discipline for follow-up;
- Record outcomes of case and contact investigations
- Provide Case Management Functionality
- Provide Emergency Response capability via Group Event
- Provide reporting for epidemiologic analysis, State reporting, and Federal (National Electronic Disease Surveillance System) reporting.

SYSTEM SOFTWARE:

CORE APPLICATIONS:

PHYSICIAN PORTAL: Provides a method for doctors to submit a request for lab results for any disease over the Internet and have that request auto populate IRIS as well as send that request to the Los Angeles County Department of Public Health Public Health Laboratory.

ATLAS WORLDCARE PRODUCT SUITE: The Atlas WorldCare product suite enables the user to enter, store, and analyze all relevant information needed for investigating disease incidents, outbreaks, contact investigation, and foodborne illnesses reports. The Atlas WorldCare product suite now enables users to conduct case management in a more streamlined manner and features caseload, UDFs, contacts, and contact investigation and allows development of custom dashboards. The modules included in the Atlas WorldCare product suite include but are not limited to the following:

- **COMMUNITY REPORTING MODULE:** The Community Reporting Module allows physicians and infection control practitioners to log into their own web portal and enter disease incident reports. This functionality decreases manual entry for the Los Angeles Public Health group and allows community reporters to meet their reporting obligations without faxing a paper report or calling the health department.
- **MANUAL LAB REPORTING:** Manual Lab is a web-based application created after some small laboratories with a low volume of reportable results expressed a desire

to enter results of tests immediately through the interface of IRIS. It allows the results to be generated in a Health Level-7 (HL7) file that can be sent to the proper channels for reporting purposes.

- **FOODBORNE ILLNESS WEB PAGE (Web FBI):** Web FBI is an enhancement of the Foodborne Illness Module in IRIS. The Web FBI report page allows the public to submit a food poisoning complaint that will auto-populate the Foodborne Illness Module in IRIS.
- **EXTERNAL LAB VIEWER:** External Lab Viewer is a web-based application that enables external laboratories participating in the ELR (as defined below) to view HL7 messages submitted by their laboratory. The portal displays what has been sent to the County in either HL7 or graphic format and allows searching reports by date range, file name, accession number, or patient name.
- **ANIMAL REPORT MODULE:** The Animal Report module allows entry of records within the system on animals with diseases. An additional animal tab was added to the main search page to allow searching for and accessing the animal records. The animal record consists of three predefined tabs: identification, veterinary and vector. Much of the data elements on these tabs were originally based on the rabies report paper form for Los Angeles County with a few additions to allow for vector control and field monitoring activities
- **GROUP EVENT:** Facilitates emergency response and allows users to set-up a “person record” for each individual associated with an “Exposure Event” such as a gas leak, wildfire, flood, etc. Although no disease is associated with this type of record, users able to view any previously reported disease incidents for an individual.
- **ELECTRONIC LABORATORY REPORTING (ELR):** The ELR provides software and connectivity to verify, process, and transfer lab results that are reported from laboratories through their electronic laboratory information system (e.g., LIS). ELR is accessible within the IRIS. Data arrives and is held at the staging area in IRIS. Identified as Contractor Software under the Development Agreements.
- **WORLDCARE ALERT:** WorldCare Alert functions as real-time alerting system that uses email, pagers, or wireless devices to notify its users when a preset situation has occurred. The WorldCare Alert system can be set up based upon many differing parameters from public health priorities to clinical events. The WorldCare Alert system can even be used to recognize potential bioterrorism events. For instance, a WorldCare Alert could be set up to notify the health department if a laboratory test for anthrax was requested by a local physician or hospital. Identified as Contractor Software under the Development Agreements.
- **ATLASCONNECT:** The AtlasConnect software provides automatic and secure transfer of files to and from a server, without requiring a VPN connection. AtlasConnect uses the familiar HTTP port, often already opened for web browsing, so setup becomes a simple procedure and not a complicated inter departmental

project taxing multiple resources over a period of time. Identified as Contractor Software under the Development Agreements.

- **MINI-LABAWARE (FORMERLY MINI-PUBLIC HEALTH INFORMATION LINK (PHIL)):** Mini-LabAware provides a subset of the functionality found in LabAware such as transformation, translation, and communications services operating at lab site to facilitate local filtering of reportable conditions to the public health department. Identified as Contractor Software under the Development Agreements.
- **LABAWARE (FORMERLY KNOWN AS PUBLIC HEALTH INFORMATION LINK (PHIL)):** LabAware acts as a real-time electronic interface and data repository for the storage of test results. It also performs many tasks involved with the reporting process while seamlessly integrating with local health department's existing disease surveillance systems. To determine which results are necessary for reporting, LabAware utilizes a Rule-based Filtering Engine, which selects the lab results that evidence reportable disease incidents. This identifies which results are positive or abnormal and removes those that are not in these reportable categories. LabAware then manages these exceptions. Upon receipt of ELR transmission, LabAware utilizes the Atlas Interface Engine, which performs address standardization and data translation to standard coding formats for transmission. This translation changes the laboratory message from local message codes into standardized medical vocabulary codes for consistency. Then LabAware utilizes a Secure Communications Shuttle to transmit test results to the appropriate local health authority using secured transmission techniques. In addition, LabAware can keep track of all the messages sent and be used to audit prior messaging. Identified as Contractor Software under the Development Agreements.
- **ATLAS ELECTRONIC HEALTH RECORD (EHR) GATEWAY:** Atlas EHR Gateway is designed to process electronic case reports (eCRs) and electronic initial case reports (eICR) from a hospital emergency medical record (EMR) via Clinical Document Architecture (CDA) format. The EHRGateway creates and transmits the eCR/eICR in an HL7 message commonly known as Clinical Document Architecture.
- **SQL SERVER REPORTING SERVICES (SSRS) REPORTS:** The SSRS Reports function provides reporting and mapping functionality for IRIS, in addition to other functionality for IRIS. The SSRS Reports function also converts the location data to graphically display the incidents giving the user additional information in their effort to protect the public.
- **OTHER REPORTING FUNCTIONALITY:** This functionality is used to design and generate reports from a wide range of data sources. It allows the user to create their own reports for use as ongoing analysis or ad hoc reporting.

THIRD PARTY SOFTWARE: Below are the Third-Party Software products included in the System Software as of the Amendment 10 Effective Date. Contractor may substitute one or more products having at least the functionality of the Third-Party Software product being replaced and licensed on at least the same terms and conditions as the License and at no additional cost to County. The substituted product(s) shall automatically be deemed to be System Software for all purposes under the Agreement, including but not limited to, warranties, Maintenance Services, Support Services and Hosting Services.

MELISSA DATA: (GeoCoder-address standardization): Melissa data provides solutions to cleanse and update address information. Updated regularly, Melissa data ensures that address information entered in IRIS is accurate while determining the geographical coordinates to locate the address.

**ATTACHMENT D.1
SYSTEM REQUIREMENTS FOR UPGRADED SYSTEM**

* The **PROPOSED SOLUTION** column heading is used in this ATTACHMENT D.1 (SYSTEM REQUIREMENTS FOR UPGRADED SYSTEM) to Exhibit D (Description of System Software) for reference and shall not be interpreted to limit Work Contractor is to provide in order to ensure the Upgraded System meets the requirement.

** The **REQUIREMENTS TRACEABILITY MATRIX** column heading is used in this ATTACHMENT D.1 (SYSTEM REQUIREMENTS FOR UPGRADED SYSTEM) to Exhibit D (Description of System Software) for reference and identifies how each requirement will be met as follows:

- Baseline Configuration (BC) - provided as configuration of component of IRIS
- Baseline Interface Development (BID) - provided as an Interface
- Baseline Modification (BM) - provided as modification to IRIS
- Dashboards – provided during Task 7 (Dashboards for Upgraded System) of Exhibit B (Statement of Work)
- Data Conversion and Migration (DCM) - provided during Task 13 (Data Conversion and Migration) of Exhibit B (Statement of Work)
- Migrate AWS – provided during Task 4 (Migration to System Environments in Amazon Web Services Infrastructure)
- Product Baseline (PB) - baseline component of IRIS
- Provide SLR - provided as part of Service Level Requirements
- SRS Reports – provided during Task 21 (Reports for Upgraded System) of Exhibit B (Statement of Work)
- TBD – Requires additional review among the Parties to determine whether included in the Product Baseline, Tasks 1-26 of Exhibit B (Statement of Work), or Task 30 (Provide As-Needed Additional Work) of Exhibit B (Statement of Work). TBD will also be indicated where applicable in the GAP, *PROPOSED SOLUTION, **REQUIREMENTS TRACEABILITY MATRIX: and SOW REQUIREMENT TYPE: columns. In the event all or a portion of the item is determined to require Additional Work, then if desired by County, will be acquired as Additional Work under and in accordance with Task 30.

SOW REQUIREMENT TYPE: Identifies in what Task of Exhibit B (Statement of Work) required Work, if any, will be performed, although required Work may be performed in other Tasks.

ITEM#	PROGRAM	REQUIREMENTS	GAP	* PROPOSED SOLUTION	** REQUIREMENTS TRACEABILITY MATRIX:	SOW REQUIREMENT TYPE:
1	TBCP	IRIS shall enable functionality to pre-populate data (pre-existing data such as demographic, lab, diagnostic, history, etc.) to appropriate form(s), upon entry and save of data to reduce manual data entry and redundancy.	Not a Gap	The WorldCare Suite version 16 has the "auto-populate" feature that creates a disease incident using pre-identified data	PB	Product Baseline

**ATTACHMENT D.1
SYSTEM REQUIREMENTS FOR UPGRADED SYSTEM**

ITEM#	PROGRAM	REQUIREMENTS	GAP	* PROPOSED SOLUTION	** REQUIREMENTS TRACEABILITY MATRIX:	SOW REQUIREMENT TYPE:
				elements when a report is received via ELR or Community Reporting Module (Provider Portal), which helps reduce manual data entry and redundancy.		
		IRIS shall allow multiple creations of Exposure Site Setting which are associated to an Index to allow tracking of exposure location (e.g. school, band room, etc.) information for case investigation and management.				
2	TBCP	IRIS shall allow multiple creations of Contact which are associated to an Exposure Site Setting to allow tracking of contacts information for Exposure Site Setting and case investigation and management. Must have the functionality to connect/link from Index --> Exposure Site --> Contact, and not just from Index --> Contact, and track by site and sub locations, (e.g. site = school address and sub location = floor, room, etc.).	Not a Gap	In WorldCare Suite, but requires configuration included in Exhibit B (Statement of Work)	BC	Product Baseline
3	CHS/TBCP	IRIS shall support charting of services for Community Outreach events, (e.g. outbreak, education, consumer and community, etc.) to allow users the ability to document event notes pertaining to specific group event.	Not a Gap	Group event in WorldCare Suite.	PB	Task 26 UDFs for Upgraded System

**ATTACHMENT D.1
SYSTEM REQUIREMENTS FOR UPGRADED SYSTEM**

ITEM#	PROGRAM	REQUIREMENTS	GAP	* PROPOSED SOLUTION	** REQUIREMENTS TRACEABILITY MATRIX:	SOW REQUIREMENT TYPE:
4	TBCP	IRIS shall provide "Search" screen that allows user to search for patient(s) with the following user-defined search parameters: <ul style="list-style-type: none"> - Last Name - First Name - Birthdate (DOB) - SSN - RVCT Number (CalREDIE) - Hospital Record Number (MRN) 	Gap = Search by RVCT Number (CalREDIE)	Search functionality exists in WorldCare Suite version 16 for all except search by RVCT Number (CalREDIE).	BMI	Task 26 UDFs for Upgraded System
5	TBCP	IRIS shall integrate functionalities from CMap and TRIMS that allows grouping by Geno Type clusters and generate all cases associated to the specific Contact investigation or patient.	Gap	To be addressed during data migration.	BMI	Task 13 Data Conversion and Migration Task 26 UDFs for Upgraded System
6	TBCP	IRIS shall enable features that will allow TBCP Epi Team to facilitate TB Clearance Screening from homeless shelters and enable auto import of data from the TB Clearance, including T-SPOT data results. The need for this functionality is to support population associated with the EPI center of the large homeless outbreak based on match cases of genotype cluster.	Gap	To be addressed during data migration.	BMI	Task 13 Data Conversion and Migration
7	TBCP	IRIS shall capture and collect data relevant to "incentives and enablers" services (Outpatient Treatment service for homeless TB patient).	Gap	To be addressed during data migration.	BMI	Task 13 Data Conversion and Migration
8	TBCP	IRIS shall support lab results notification for the following results categories to enable prioritization of investigation and case management, and conform to CDPH regulations for	Not a Gap	Related to ELR: TB Program began validation of TB lab results in WorldCare Suite	BC	Product Baseline

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		timely reporting and investigation of suspected or confirmed cases: <ul style="list-style-type: none"> - Positive Culture Results (e.g. HIV, STD, TB) - Results with stat or ASAP priority - Abnormal or Critical Results 		version 15 ELR Test environment in November 2017. After validation is completed, TB lab results will be moved to IRLS. Notification and or alerts can be sent via ARNOLD or email. This must be configured, which is included under Exhibit B (Statement of Work).		
9	DHSP/TBC P	IRIS shall automatically identify high-risk patient according to user-defined forms business rules or by data entry and enable alerts to clinical staff when individual form or documented data indicates that patient is high-risk, and critical interventions may be required.	Not a Gap	Notification and alerting functionality exists in WorldCare Suite version 16. However, other functionality must be configured, which is included under Exhibit B (Statement of Work).	BC	Task 26 UDFs for Upgraded System
10	TBCP	IRIS shall support automatic import or migration of data from exiting database application software (e.g. TRIMS, Casewatch, CMAP, eHARS) via batch transfer (FTP), and IRLS shall be able to capture these batch records exported from the FTP, including capture of records in their existing format, without degradation of content or structure, retaining any contextual relationships between the components of any individual record. And, shall be able to import any directly associated event history data with the record into IRLS and/or into standardized UDF(s).	Not a Gap	WorldCare Suite version 16 contains many methods for importing data. This will also be addressed during data migration.	BID	Task 13 Data Conversion and Migration

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ITEM#	PROGRAM	REQUIREMENTS	GAP	* PROPOSED SOLUTION	** REQUIREMENTS TRACEABILITY MATRIX:	SOW REQUIREMENT TYPE:
11	TBCP	<p>IRIS shall support capturing of patient data information through various reporting, and create the following User Defined Forms (UDFs) to collect those reportable data required to capture and manage: Patient, Incident and LTBI. User Defined Forms (UDFs) report data include without limitation the following:</p> <ul style="list-style-type: none"> - Confidential Morbidity Report (CMR) - H-803 and H-804 - H-1365 & H-1397 - H290 and eH290 - Lab Reports - Class B TB Notification - Genotype results - Class B TB (H-304) 	Not a Gap	<p>Ability to create User Defined Forms already exists in WorldCare Suite version 16.</p>	PB	Task 26 UDFs for Upgraded System
12	TBCP	<p>IRIS shall capture and maintain TB Screening history information specific to generated H-304 report form (UDF).</p>	Not a Gap	<p>H-304 will be created as a UDF Post IRIS Go-Live.</p>	PB	Task 26 UDFs for Upgraded System
13	TBCP	<p>IRIS shall incorporate "gateway" functionality that will allow interconnection with ORCHID to import/export data required for reporting, case management and disease surveillance.</p>	Gap	<p>Atlas EHR Gateway and ORCHID Interface</p>	BID	<p>Task 23 ORCHID Baseline Interface for Upgraded System Task 25 Electronic Health Record Gateway Application</p>
14	TBCP	<p>IRIS shall integrate reporting functionality that allows TBCP EPI unit to generate an RVCT report to use for evaluation and enable auto-import or transmission of the RVCT report data into CalREIDIE via "gateway" to prevent manual entry of data information.</p>	Not a Gap	<p>RVCT via UDF or SSRS Report possible solutions</p>	BC	Task 26 UDFs for Upgraded System

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ITEM#	PROGRAM	REQUIREMENTS	GAP	* PROPOSED SOLUTION	** REQUIREMENTS TRACEABILITY MATRIX:	SOW REQUIREMENT TYPE:
15	TBCP	<p>IRIS shall support configuration of patient data to produce standard periodic or on-demand TBCP operational management reports, including without limitation:</p> <ul style="list-style-type: none"> - Confirmable Suspect Report (line list) - Case Presentation Report: summary report used for management of cases - RVCT Report, including facsimiles of "follow-up reports associated to the case with verified TB - Case and Suspect Report: report based on suspects that have been opened for more than 90 days. 	Gap	<p>Dashboards and SSRS Reports. WorldCare Suite's Ranged Reports can also be used to generate many exports and reports.</p>	BMI	<p>Task 7 Dashboards for Upgraded System Task 21 Reports for Upgraded System</p>
16	DHSP	<p>IRIS shall enable electronic/automated transmission and recording of lab data via bi-directional interface through an HL7 exchange from ELR into IRIS.</p>	TBD	<p>This relates to ELR transmission. WorldCare Suite currently accepts ELR from public and private labs, but does not send information back to labs.</p>	TBD	TBD
17	DHSP	<p>IRIS shall enable functionalities that allows linkage of sexual partners with multiple diseases.</p>	Gap		BMI	<p>Task 26 UDFs for Upgraded System</p>
18	DHSP	<p>IRIS shall create a rule for purging data for archive and allow for extraction and import of data necessary for Genotype reporting.</p>	Gap		BMI	<p>Task 13 Data Conversion and Migration</p>

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ITEM#	PROGRAM	REQUIREMENTS	GAP	* PROPOSED SOLUTION	** REQUIREMENTS TRACEABILITY MATRIX:	SOW REQUIREMENT TYPE:
19	DHSP	<p>IRIS shall provide flexible, customizable mechanism for patient "look-up" (record search) and retrieval of record that can be easily organized in a variety of views or by the following filter and user-defined search parameters to minimize the volume for "a-like" client results when client search is performed:</p> <ul style="list-style-type: none"> - Patient ID - Medical Record Number (MRN) - Incident# - AKA - SSN - Phone - Address 	Not a gap	<p>Search feature in current WorldCare Suite version 16. Multiple search functionality will be included in WorldCare Suite version 17.</p>	PB	Product Baseline
20	DHSP	<p>IRIS shall allow "checking mechanism" to validate unique provider and site information corresponding to the appropriate individual treatment or lab.</p>	Not a Gap	<p>Functionality in WorldCare Suite version 16</p>	PB	Product Baseline
21	DHSP	<p>IRIS shall reduce the redundancy of data entry and charting by enabling functionality to pre-populate data (pre-existing data such as demographic, etc.) to appropriate forms, upon entry and save of data to reduce redundancy.</p>	Not a Gap	<p>Refer to Item# 1 proposed solution. Functionality exists in WorldCare Suite version 16.</p>	PB	Product Baseline
22	CHS/DHSP	<p>IRIS shall enable functionality for Census Tract (geocoding) to allow routing and re-routing of case to the appropriate PHI/PHN that belongs to the appropriate GIS (SPAs, Health Center, and Health District). For example, if a case was assigned to an individual PHI/PHN that is no longer within the GIS, then the system shall enable re-routing of the case to appropriate PHI/PHN based on Census Tract.</p>	Not a Gap	<p>In WorldCare Suite: Geocoding, assigning census tract and district exists in World Care Suite.</p>	BMI	Product Baseline

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ITEM#	PROGRAM	REQUIREMENTS	GAP	* PROPOSED SOLUTION	** REQUIREMENTS TRACEABILITY MATRIX:	SOW REQUIREMENT TYPE:
23	DHSP	IRIS shall allow scanning of printed forms/reports for data monitoring to ensure data captured on paper-form (generated from Casewatch) corresponds with the data that is manually entered in the disease surveillance system (IRIS) for data integrity.	Not a Gap	In WorldCare Suite.	PB	Product Baseline
24	DHSP	IRIS shall support documentation of billable event notes related to pregnant STD cases for State reporting.	Gap	TBD	TBD	TBD
25	DHSP	IRIS shall enable functionality for searching lab history for an individual incident or disease in chronological order based on the date when lab was entered/ordered in the system and not onset date (when lab was reported).	Not a Gap	In WorldCare Suite	PB	Product Baseline
26	DHSP	IRIS shall generate custom report and enable exporting of HIV ELR results from IRIS.	Not a Gap	WorldCare Suite Ranged Reports, WorldCare Suite version 16 contains multiple report functionality, but can also be provided via SSRS Reports.	PB	Task 21 Reports for Upgraded System
27	DHSP	IRIS shall support collection and processing of sensitive information, specifically morbidity related to STD/HIV case and shall generate report based on data collected.	Gap	Dashboard/SSRS and Ranged Reports	BMI	Task 21 Reports for Upgraded System
28	DHSP	IRIS shall support integration of HIV data collected through CDPH - CalREDIE into IRIS in conjunction with HIV ELR data generated from eHARs to limit data entry redundancy.	Gap	ELR: Currently HIV receives lab results via Office of AIDS Reporting Module to receive disease reports from providers.	BID	Task 21 Reports for Upgraded System Task 26 UDFs for Upgraded System

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ITEM#	PROGRAM	REQUIREMENTS	GAP	* PROPOSED SOLUTION	** REQUIREMENTS TRACEABILITY MATRIX:	SOW REQUIREMENT TYPE:
29	CHS/TBCP	<p>IRIS shall provide functionality for email notification each time a case is in the following status for the overall case review and management. The following status activities shall include without limitation:</p> <p>CHS</p> <ul style="list-style-type: none"> - New Supervisor (assigned) (Pending Removal) - New PHN (assigned) - Open - Reassign - Returned (by Supervisor) - Returned (by AMD) - Returned (by Program) - To Supervisor (under review) - To AMD (under review) - To Program (under review) - Hold - Suspended (to supervisor under review) - Closed - Suspended <p>TBCP : List of Activities (status drop down (DDL) values</p> <ul style="list-style-type: none"> - Initial Registration - Assigned PHN - Update Suspect - Interview Assigned <p>And shall include status for each activity to indicate its completed.</p>	Not a Gap	Process Statuses for CHS and TB need to be added to the current Process Status Dictionary in WorldCare Suite.	BC	Product Baseline

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ITEM#	PROGRAM	REQUIREMENTS	GAP	* PROPOSED SOLUTION	** REQUIREMENTS TRACEABILITY MATRIX:	SOW REQUIREMENT TYPE:
30	CHS	IRIS shall enable functionality that allows "user group" assigned to a specific disease to manage case/investigation that is assigned to a specific SPA group/jurisdiction. A subset of users shall be able to see only those cases assigned to the group.	Not a Gap	WorldCare Suite has this capability. However, it must be configured and business rules defined by Program	BC	Task 26 UDFs for Upgraded System
31	CHS	IRIS shall provide Dashboard views (custom views) of investigations records and allow the drill down functionality into the specific record. The Dashboard views shall display views of records belonging to the current user and separate views of records that are shared by the current user. The views shall include but not limited to: <ul style="list-style-type: none"> - Active Cases by SPA - Case Status - My Closed Cases - My Shared Closed Cases - Active Cases by Program - Active Cases vs. Outbreaks/TB Exposure Sites - Active Cases by Priority view. 	Gap	Dashboards and SSRS Reports	BMI	Task 7 Dashboards for Upgraded System Task 21 Reports for Upgraded System

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ITEM#	PROGRAM	REQUIREMENTS	GAP	* PROPOSED SOLUTION	** REQUIREMENTS TRACEABILITY MATRIX:	SOW REQUIREMENT TYPE:
		IRIS shall enable functionality to generate aggregate and ad-hoc reports for the following case summary: <ul style="list-style-type: none"> - PHN Case Summary - PHNS Case Summary - SPA Case Summary - Health District Case Summary - Census Tract Case Summary - Open Cases - Open TB Contacts - CHS Performance Measure - Consumer and Community - Open ACD - Open TB - Open STD - Open IP 				
32	CHS		Gap	Dashboards and SSRS Reports	BMI	Task 7 Dashboards for Upgraded System Task 21 Reports for Upgraded System
33	ACDC	IRIS shall support "import utility/tool" to allow importing of vast amount of data records.	Not a Gap	in WorldCare Suite: Import Utility	PB	Product Baseline
34	ACDC	IRIS shall enable geographical mapping and have the capability to plot disease incidents on a map within IRIS, featuring overlays to city in addition to SPAs and districts.	Not a Gap	Dashboards and SSRS Reports: Enhanced Geographical Mapping	BMI	Task 7 Dashboards for Upgraded System Task 21 Reports for Upgraded System
35	CHS	IRIS shall support documentation and recording of "group events" for targeted outreach (e.g. national disaster, Exide, lead services).	Not a Gap	In WorldCare Suite	PB	Task 26 UDFs for Upgraded System
36	CHS	IRIS shall support documentation of "community events" for tracking purposes.	Not a Gap	In WorldCare Suite	PB	Task 26 UDFs for Upgraded System

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37	CHS	IRIS shall enable functionality for "time tracking" to allow nursing the ability to enter unit of service (based on 15 minutes increments), and record the total time spent on investigation per patient record.	Gap	WorldCare Suite tracks time spent on investigations and outbreaks, but not 15-minute increments.	BMI	Task 26 UDFs for Upgraded System
38	CHS	IRIS shall integrate nursing case management "acuity" solution/tool that will promote equitable nurse-patient assignment based on the client's "level indicators" for PHN/PHI accessibility to client, living situation, compliance, barriers to care, coping skills, level of involvement and travel distance to receive care.	Gap	Not in WorldCare Suite, but will be added under the Statement of Work.	BMI	Task 26 UDFs for Upgraded System
39	ACDC/CHS	IRIS shall prevent access of "high-profile" records by any user or administrator unless defined by system to be authorized users or groups based on roles and shall maintain privacy and security governing online incident and reporting and occurrence screening via strict electronic audit trails of information high-profile. System shall enforce the most restrictive privileges needed by each user or group to conduct tasks specified for that role.	Gap	EFC currently in WorldCare Suite, but this specific functionality does not exist. Locking/prevent access to specific files in EFC will be developed under the Statement of Work.	BMI	Task 9 Other Baseline Modifications for Upgraded System
40	IT - AUTHENTICATION	IRIS shall integrate with the County's Microsoft Active Directory Federation Service (ADFS) infrastructure and using the County's implementation of Multi-Factor Authentication (MFA). Any user connecting to the application will be required to enroll with the County's MFA environment prior to granting access.	Gap	IRIS Integration with Option 2 ADFS MFA Using WS Federation.	BMI	Task 9 Other Baseline Modifications for Upgraded System
41	IT - HOSTING	IRIS shall support 300 peak concurrent logons internal and 800 externals.	Gap	IRIS will be hosted in the Amazon Web Services (AWS) Infrastructure.	Migrate AWS	Task 4 Migration to System Environments in Amazon Web Services Infrastructure

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42	IT - HOSTING	IRIS storage and processing capacity shall be sized adequately to support the number of active patients, transaction volumes, images for data conversion.	Gap	IRIS will be hosted in the Amazon Web Services (AWS) Infrastructure.	Migrate AWS	Task 4 Migration to System Environments in Amazon Web Services Infrastructure
43	CHS/TBCP	IRIS shall create H-300 (UDF) to enable electronic request for home evaluation to allow capability for TBCP to initiate a "Home Evaluation" for a patient. Upon initiation of request, IRIS shall enable functionality for notification to CHS for review and completion. This functionality shall support real-time documentation and notification of H-300 request to eliminate manually faxing of form to the two entities (e.g. TBCP and CHS).	Gap	IRIS team proposed creation of UDF for H-300 and use the assignment "task" functionality within WorldCare Suite to support notification process. To-Be Workflow: TBCP shall initiate the Home Evaluation request (H-300), and initiate assignment of "task" to CHS for notification, including form. CHS shall be notified via task queue and upon evaluation and completion of form by CHS, a task shall be generated to TBCP to confirm CHS acknowledgement of home evaluation.	BMI	Task 26 UDFs for Upgraded System

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44	CHS/TBCP	<p>IRIS shall enable functionality that will capture the initiation and confirmation of suspect or confirmed case based on eh-290 referral from TBCP. This functionality shall provide notification to CHS to ensure TBCP has reviewed and has initiated suspect or confirmed registration.</p> <p>This functionality shall support CHS task for insuring case confirmation by doctor and eliminate suspect/confirmed registration.</p> <p>Workflow variance: For "walk-in" patient, which initiation of suspect or confirmed case registration shall be entered in IRIS.</p>	Gap	<p>SMEs proposed creating a "rule" for identifying those cases for suspect or confirmed based on TBCP registration, and enable "checkbox" to confirm case registration by PHNs has been reviewed.</p> <p>Rule logic can be generated based on TBCP policy/procedure for TB suspect registration of 14-days.</p>	BNI	Task 26 UDFs for Upgraded System

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45	CHS/TBCP	<p>IRIS shall enable functionality that supports the level status for each supervision and/or assignment for the overall case review, and for each status activity. The following activity list (not listed in order of workflow) shall include without limitation:</p> <ul style="list-style-type: none"> - Initiation of case (suspect/confirmed) - Received assignment (Supervisor) - Receive assignment (PHN/PHI) - Field Status - Supervisor Review - AMD Review - Program Review - Initiation of Contact Investigation - Approve Discharge - Assign to PHNS - Update suspect registration (e.g. those updates within the 14-days from initiation) - In Progress/In Process - Completed - Open (beyond the expected due date, past due, etc.) <p>IRIS shall set up business logic (rule) for the individual activity to enable triggering of each status.</p>	Not a Gap	<p>IRIS team affirmed that the "Investigation" component within the WorldCare Suite has the "status" field, and proposed development of Dashboard (SSRS) within WorldCare Suite to enable the functionality for managing those case investigations.</p>	BC	<p>Task 21 Reports for Upgraded System Task 26 UDFs for Upgraded System</p>
46	CHS/TBCP	<p>IRIS shall enable functionality to capture exported file containing data elements collected from the H-513 (exported from ORCHID) to support case closure for suspected or confirmed TB case, specifically pertaining to PMD case and/or workflow.</p>	Gap	<p>UDF development Post IRIS Go-Live and ORCHID Interface</p>	BC/BID	<p>Task 23 ORCHID Baseline Interface for Upgraded System Task 26 UDFs for Upgraded System</p>

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47	TBCP/CHS	Two User Defined Forms (UDFs) shall be created in IRIS with pre-defined fields and business rules that will support the electronic generation H-1365 and H-1397 forms from the County hospital/provider. Upon submission of the H-1365 and H-1397, the system shall auto generate UDF (H-290/eH-290) and have the data elements pre-populate based on data entered from the H-1365 and H-1397.	Not a Gap	UDF development	BC	Task 26 UDFs for Upgraded System
48	CHS/TBCP	IRIS shall create two (2) TBCP specific User Defined Forms (UDFs) called H-803 and H-804 with pre-defined fields and business rules that will support workflows for reporting of TB case and discharging of patients by outpatient/private providers. IRIS shall enable functionality to allow outpatient/private provider to electronically initiate TB case reporting directly from IRIS through the generation of H-803 (UDF).	Not a Gap	UDF development	BC	Task 26 UDFs for Upgraded System
49	CHS/TBCP	Upon patient's discharge, IRIS shall enable functionality to auto-generate H-804 UDF to allow providers and/or TBCP to initiate request for approval (under Gotch law) to have the patient's care plan reviewed and approved by a health officer (PMD/AMD). The completion of H-804 shall correlate with the original H-803 TB case report for discharge processing. IRIS shall support "Event notes" with notification per activity status.	Not a Gap	In WorldCare Suite version 16: ARNOLD and Alerts via email. Must be configured.	BC	Task 26 UDFs for Upgraded System

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50	CHS/TBCP	<p>IRIS shall incorporate the data elements defined in eH-290 (TRIMS TB Case Registration) to allow the provider, TBCP or CHS to initiate TB case registry directly from IRIS. Basic data elements shall include without limitation:</p> <ul style="list-style-type: none"> - Demographics (e.g. patient's name, address, AKAs, SSN, etc.) - Patients history (e.g. alcohol abuse, smoking, drugs, etc.) - Diagnostic (e.g. chest x-ray, etc.) - Lab collection (e.g. sputum, HIV test, STD test, etc.) - Patient's provider information - Medications - Event or clinical notes 	Not a Gap	Development of UDFs and configurations	BC	Task 26 UDFs for Upgraded System
51	CHS/TBCP	<p>IRIS shall enable functionality for "alerts" and facilitate scheduling of tasks for notification upon patient TB registration by TBCP surveillance unit or CHS Nursing to reduce TB registration redundancy and to support acknowledgement confirmation by either program when registration is generated, and when data updates to TB registration is confirmed.</p> <p>Schedule of tasks is contingent upon initiation of TB Registration:</p> <ol style="list-style-type: none"> 1. If TB Registry and Incident is initiated by TBCP, then send alert/task to CHS for notification of registry and allow CHS to review and/or update any TB related data pertinent to the TB registration. 2. If TB Registry and Incident is initiated by CHS (via "walk-in" to CHS clinic), then send alert/task to TBCP for notification of registry and acknowledgment of completion of registration or review/update. 	Not a Gap	<p>Task may be configured based on the TB case/investigation status. However, TBCP and CHS must define what those status values would be to trigger the logic for notification. Must be configured.</p>	BC	Task 21 Reports for Upgraded System Task 26 UDFs for Upgraded System

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52	CHS/TBCP	IRIS shall create a report to track and monitor those PMD cases that need to be closed by specific time period, to ensure those cases are closed in timely manner by the physician.	Gap	SSRS Report	BMI	Task 26 UDFs for Upgraded System
53	CHS/TBCP	IRIS shall enable functionality to support workflow on following up with the completion of treatment from other receiving jurisdiction (outcome of treatment for case that are no longer within LA County). Two User Defined Forms (UDFs) shall be created with pre-defined fields and business rules that will support workflows for CHS Nursing to complete for PMD cases. These two UDFs are: <ul style="list-style-type: none"> - Pill Account Form - Form that is sent to PMD for monthly update 	Not a Gap	Workflow exist in WorldCare Suite version 16. Workflow must be configured.	BC	Task 26 UDFs for Upgraded System
54	CHS/TBCP	IRIS shall enable functionality to allow CHS Nursing to electronically complete the "Pill Account" form and the "Monthly Update" form directly from IRIS and have the data elements pre-populated based on data entered from H-290 or H-513.	Not a Gap	UDFs exist in WorldCare Suite version 16. Must be developed and add appropriate business rules.	BC	Task 26 UDFs for Upgraded System
55	CHS	IRIS shall enable functionality to generate standard "follow-up letter" for PMD and "Perinatal Hepatitis B letter" for their physicians with department letterhead and patient information auto-populated.	Not a Gap	Letter Repository exists in WorldCare Suite version 16. UDFs can also be used to create letters.	BC	Task 26 UDFs for Upgraded System
56	CHS	IRIS shall enable functionality that allows flagging of certain variables, (e.g. if high profile, if cluster, if case is under five (5) years old, etc.) to define those cases that are high priority.	Not a Gap	WorldCare Suite has this capability. However, it must be configured and business rules defined by Program.	BC	Task 21 Reports for Upgraded System Task 26 UDFs for Upgraded System
57	CHS	IRIS shall integrate lab orders and results from SunQuest, and enable auto-population of lab data information into applicable	Not a Gap	In WorldCare Suite version 16.	PB	Task 26 UDFs for Upgraded System

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		User Defined Forms (UDF) for auto update or data entry of results.				
58	CHS	IRIS shall incorporate geocoding (Census Tract) within LA County and outside LA County jurisdiction (e.g. Orange County, San Bernardino, etc.) for case assignment, investigation and intervention to allow user the ability to assign ANM, PHNS, PHN or PHI based on Census Tract ID (geocoding), which functionality currently exists in CMAP.	Not a Gap	In WorldCare Suite version 16	PB	Product Baseline Geocoding/Census Tract
59	CHS	IRIS shall enable functionality to allow data entry of non-County Index case to capture exposure site and allow case manager to see what cases are being followed.	Not a Gap	In WorldCare Suite version 16, but must be configured.	BC	Product Baseline
60	CHS	IRIS shall support charting for OR services.	Not a Gap	Can chart in WorldCare Suite version 16.	PB	Task 21 Reports for Upgraded System Task 26 UDFs for Upgraded System
61	CHS	For Contact Investigations purpose, when client is admitted to the hospital, IRIS must enable functionality to identify the individual nurse (e.g. was client followed by CHS PHN, TBCP PHN, etc.) assigned to follow the patient and allow user the ability to view patients admission/visit service outcome.	Not a Gap	In WorldCare Suite version 16, but must be configured.	BC	Product Baseline

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62	VPDC - EPI	IRIS shall create VPDC specific UDFs for Upgraded System called "Initial Assessment Form (IAF)" that shall include pre-defined fields and business rules, and shall enable auto-population of data entered from the six defined tabs (e.g. Patient, Clinical, Laboratory, Epi Info, Facility Involvement and Investigation). This form is used to collect data elements required for reporting to State, including without limitation initial assessment information of patient from reporting source/provider, medical record, lab order and results, bacterial for measles, etc.	Not a Gap	CDPH UDFs already exist in WorldCare Suite. Activate UDFs developed by CDPH CalREDIE that corresponds to this form.	BC	Task 26 UDFs for Upgraded System
63	VPDC - EPI	IRIS shall create VPDC measles specific UDF called "VPDC Measles Activity Log" that shall include pre-defined fields and business rules; and shall be stored into the Electronic Filing Cabinet (EFC) to allow EPI Unit the ability to verify exposure source and sites/contacts exposed during infectious period. IRIS shall enable auto-population of dates based on rash onset date defined in the case/contact report.	Not a Gap	WorldCare Suite's Community Reporting Module already allows UDFs to be attached and view by medical providers.	BC	Task 26 UDFs for Upgraded System
64	VPDC - EPI	IRIS shall create VPDC specific UDF called "Measles Exposure Interview Form" that shall include pre-defined fields and business rules. The form shall be generated electronically upon completion of investigation by CHS for each case and exposed contact, and enable auto-population of the form based on data information entered in the contact investigation record.	Not a Gap	CDPH UDFs already exist in WorldCare Suite. Need to activate UDFs developed by CDPH CalREDIE that corresponds to this form.	BC	Task 26 UDFs for Upgraded System

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SYSTEM REQUIREMENTS FOR UPGRADED SYSTEM

ITEM#	PROGRAM	REQUIREMENTS	GAP	* PROPOSED SOLUTION	** REQUIREMENTS TRACEABILITY MATRIX:	SOW REQUIREMENT TYPE:
		The form shall include, without limitation all field questions defined in the current paper-form.				
65	VPDC - EPI	IRIS shall create a standard fillable "Exposure Notification Letter" (template) to be generated electronically through IRIS and enable feature for auto-population of Contact information into the Exposure Notification Letter, and allow auto mail merge of letter to Contact through batch process or on demand.	Not a Gap	Letter Repository exists in WorldCare Suite version 16. UDFs can also be used to create letters.	BC	Task 21 Reports for Upgraded System Task 26 UDFs for Upgraded System
66	VPDC - EPI	IRIS shall create VPDC specific UDF called "Case Report Form" that shall include pre-defined fields and business rules and shall be generated electronically for each suspected case, and shall enable functionality for auto-population of Contact information entered in the contact investigation record. Upon completion of form by CHS, EPI Unit shall have the capability to generate a Case report based on completed form.	Not a Gap	CDPH UDFs already exist in WorldCare Suite. Activate UDFs developed by CDPH CalREDIE that corresponds to this form.	BC	Task 26 UDFs for Upgraded System
67	VPDC - EPI	IRIS shall create VPDC specific User Defined Forms (UDF) for "LAC PHL and CDPH VRDL Requisition" forms that shall contain barcode for each identified requisition form. The "LAC PHL and CDPH VRDL Requisition" form will allow EPI staff unit the capability to request collection of specimen or results from PHL and CDPH electronically through IRIS. IRIS shall enable auto-population of patient demographic and lab data into the requisition form based on data output from the patient and Laboratory tabs, and shall enable functionality to create and generate an email notification or enable functionality for faxing of the requisition form to LAC PHL or CDPH VRDL.	Not a Gap	CDPH UDFs already exist in WorldCare Suite. Activate UDFs developed by CDPH CalREDIE that corresponds to this form.	BC	Task 26 UDFs for Upgraded System

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SYSTEM REQUIREMENTS FOR UPGRADED SYSTEM**

ITEM#	PROGRAM	REQUIREMENTS	GAP	* PROPOSED SOLUTION	** REQUIREMENTS TRACEABILITY MATRIX:	SOW REQUIREMENT TYPE:
68	VPDC - EPI	IRIS shall integrate Lab results from SunQuest.	Not a Gap	VPDC already receives lab results from 94 labs via WorldCare Suite.	BC	Product Baseline
69	VPDC - EPI	IRIS shall create VPDC specific UDF called, "Nursing Screening (Measles)" form, that shall include pre-defined fields and business rules that shall allow EPI Nursing Unit the ability to document and identify the level of priority (indicator) for case report disposition based upon screening and interview with reporting entity.	Not a Gap	CDPH UDFs are already exists in WorldCare Suite. Activate UDFs developed by CDPH CalREDIE that corresponds to this form. Must be configured.	BC	Task 26 UDFs for Upgraded System
70	VPDC - EPI	IRIS shall enable auto-population of data into the "Measles Screening" form based on data output from the tab. IRIS shall create VPDC specific UDF for "PHI Referral" that shall include pre-defined fields and business rules that shall allow EPI staff unit the ability to send referrals to PHI electronically to locate patient.	Not a Gap	In current WorldCare Suite	PB	Task 26 UDFs for Upgraded System
71	VPDC - EPI	IRIS shall enable standardize reporting for Administrative Officer of Duty (AOD) to support manual data entry of case report (based on phone reporting), and system shall rule/logic that will trigger indication of AOD report and configuration of required fields for completion.	Gap	AOD Call log in WorldCare Suite was developed specifically for ACDC doctors on call. We will need to enhance to permit this functionality.	BMI	Task 21 Reports for Upgraded System Task 26 UDFs for Upgraded System

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SYSTEM REQUIREMENTS FOR UPGRADED SYSTEM**

ITEM#	PROGRAM	REQUIREMENTS	GAP	* PROPOSED SOLUTION	** REQUIREMENTS TRACEABILITY MATRIX:	SOW REQUIREMENT TYPE:
72	VPDC - EPI	<p>IRIS shall enable functionality to generate "notification template" based on the following activity status and without limitation:</p> <ul style="list-style-type: none"> - Notification to VPDC Investigator when the lab reports are received. - Notification when case is out of jurisdiction (similar to OOJ functionality defined in CMAP). - Notification if the case report is "high suspect" after the screening/assessment (requirements corresponds to item# 69). - Notification for "Investigation Closure". Define rule for "closure" by AMD vs. closure form IP. 	Not a Gap	<p>However, this requires adding new process status to IRIS as well as configurations to ARNOLD alerting system.</p>	BC	<p>Task 21 Reports for Upgraded System Task 26 UDFs for Upgraded System</p>
73	VPDC - EPI	<p>IRIS shall create VPDC specific User Defined Forms (UDFs) with pre-defined fields and business rules for the following documents, without limitation, and shall enable functionality for auto-population of data to reduce manual entry:</p> <ul style="list-style-type: none"> - VPDC measles diary calendar - CALREDIE EPI Form - Outbreak Reporting Form (CDPH 8554) 	Not a Gap	<p>CDPH UDFs are already exists in WorldCare Suite. Activate UDFs developed by CDPH CALREDIE that corresponds to this form.</p>	BC	<p>Task 26 UDFs for Upgraded System</p>
74	VPDC - EPI	<p>IRIS shall enable functionality that will allow EPI Unit to create and display dashboard views based on user roles (e.g. Managers can see all assignments while general staff see only their own assignments) based on pre-defined rules/logic, and enable "drill down" functionality to view case detail information.</p>	Gap = drill down	<p>Dashboards and SSRS Reports. However, "drill down" will occur Post IRIS Go-Live.</p>	BMI	<p>Task 7 Dashboards for Upgraded System</p>
75	VPDC - EPI	<p>IRIS shall enable functionality to restrict access to cases or documents/forms based on pre-defined user security roles.</p>	Not a Gap	<p>In WorldCare Suite</p>	PB	<p>Task 9 Other Baseline Modifications for Upgraded System</p>

**ATTACHMENT D.1
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ITEM#	PROGRAM	REQUIREMENTS	GAP	* PROPOSED SOLUTION	** REQUIREMENTS TRACEABILITY MATRIX:	SOW REQUIREMENT TYPE:
76	VPDC - EPI	<p>IRIS shall enable functionality that shall allow detection of duplicate records based on the following record search criteria, without limitation:</p> <ul style="list-style-type: none"> - First name - Last name - DOB - Disease - Alias 	Not a Gap	In current WorldCare Suite	PB	Product Baseline
77	VPDC - EPI	<p>IRIS shall enable record search feature that allows EPI Investigator the ability to search record using "multiple/combo fields" search criteria:</p> <p>First name</p> <ul style="list-style-type: none"> - Last name - DOB - Disease Type - Alias <p>The enabling of the "multiple/combo fields" record search shall support workflow where clients have common names, and result in long list of "a-like" client name, and the additional field criteria such as the "disease type" shall minimize the search results.</p>	Gap	Multiple Search functionality is being developed for CDPH in WorldCare Suite version 17.	PB	Product Baseline and WorldCare Suite version 16.

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ITEM#	PROGRAM	REQUIREMENTS	GAP	* PROPOSED SOLUTION	** REQUIREMENTS TRACEABILITY MATRIX:	SOW REQUIREMENT TYPE:
78	VPDC - EPI	<p>IRIS shall enable "re-routing or re-assignment" of case to a respective user group (e.g. CHS Health District, PHN, PHJ, etc.) to provide EPI on-duty investigator the ability to notify and re-route case report to the appropriate investigator.</p> <p>The enabling of the functionality for "re-routing/re-assignment" of case shall support the workflow for when an EPI on-duty investigator determines an incoming case report is already under investigation by another EPI investigator; then, the EPI on-duty investigator who received the report can re-route and refer the case to the appropriate EPI investigator. The system must allow "re-routing" or "re-assignment" of case to another investigator, and not restrict to supervisor(s) only. Any investigator shall have the ability to "re-route" and "re-assign".</p>	Not a Gap	In WorldCare Suite version 16, but must be configured to address the specific needs of VPDC Epi Unit.	BC	Product Baseline
79	VPDC - EPI	<p>Upon login to IRIS, dashboard page shall display VPDC critical case management data based on the following aggregate format defined for the individual role and shall include without limitation:</p> <ul style="list-style-type: none"> - Case counts by year of receipt, disease, investigator, resolution status, reason for resolution status/disposition and other critical single case management fields; specific to VPDC. - Case counts by facility and investigator - List of current disease outbreaks - Case counts by SPAs, Health District and Supervisorial District 	Gap	Dashboards and SSRS Reports	BM	Task 7 Dashboards for Upgraded System

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SYSTEM REQUIREMENTS FOR UPGRADED SYSTEM**

ITEM#	PROGRAM	REQUIREMENTS	GAP	* PROPOSED SOLUTION	** REQUIREMENTS TRACEABILITY MATRIX:	SOW REQUIREMENT TYPE:
80	VPDC - EPI	IRIS shall create VPDC specific UDF for "disease case report" form (Pertussis form) with pre-defined fields and business rules that shall enable electronic transmission of the "Pertussis" report form data directly to CalREDIE and/or CDPH IP repository for upload by VPDC EPI Unit. Electronic upload of disease case report data shall include data from Perinatal Hepatitis B Case Report and PEP Error form.	Not a Gap	CDPH UDFs already exist in WorldCare Suite. Activate UDFs developed by CDPH CalREDIE that corresponds to this form.	BC	Task 26 UDFs for Upgraded System
81	VPDC - EPI	IRIS shall enable automated routing of case report to "Out of jurisdiction (OOJ)".	Gap	This functionality may be supported through RightFax.	BID	Task 8 Specified Baseline Interfaces for Upgraded System
82	VPDC - EPI	IRIS shall enable feature to track "facility setting" which is related to functionality defined in CMAP for exposure site setting. This feature is required by VPDC EPI Unit to support workflow for Pertussis Outbreak.	Not a Gap	Functionality currently in WorldCare Suite via UDF. Requires Configuration.	BC	Task 26 UDFs for Upgraded System
83	VPDC - EPI	IRIS shall enable functionality that allows EPI staff unit to create/load, track and link facility to an open case investigation, including integrating of the following features, without limitation: - Generate an indicator/identifier for outbreak - Populate the facility data into the Situation Log, and integrate the Situation Log to the outbreak log and auto-assign an outbreak number.	Not a Gap	Functionality currently in WorldCare Suite, but requires configuration, which is included in Exhibit B (Statement of Work).	BC	Task 26 UDFs for Upgraded System

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SYSTEM REQUIREMENTS FOR UPGRADED SYSTEM**

ITEM#	PROGRAM	REQUIREMENTS	GAP	* PROPOSED SOLUTION	** REQUIREMENTS TRACEABILITY MATRIX:	SOW REQUIREMENT TYPE:
84	VPDC - EPI	IRIS shall create VPDC specific UDF for Calderite EPI Form and integrate functionality from CMAP that allows "auto-generation" of EPI report based on collected data information entered in the EPI form for CDPH State reporting, and shall be uploaded into a standard SFTP site to facilitate the sending of EPI report to CDPH. The Calderite EPI form shall be stored in IRIS EFC component to avoid data entry redundancy, and enable auto-population of data entered from the six VPDC tabs, (e.g. Patient, Clinical, Laboratory, EPI Info, Facility Involvement and Investigation) including features that facilitate data entry validation checks and pop-up boxes.	Not a Gap	In current WorldCare Suite, but will require configuration, which is included in Exhibit B (Statement of Work).	BC	Task 26 UDFs for Upgraded System
85	VPDC - EPI	IRIS shall incorporate additional fields to the Laboratory tab in order to facilitate population of "Specimen Collection Tracking" table on the VPDC Dashboard.	Not a Gap	In current WorldCare Suite via ELR, but will require configuration, which is included in Exhibit B (Statement of Work).	BC	Task 7 Dashboards for Upgraded System
86	VPDC - EPI	IRIS shall enable customization of "My Tasks" or "My Case Load" dashboard views to include without limitation the following level of task: <ul style="list-style-type: none"> - Current active tasks - Pending tasks - Completed tasks - Follow-up tasks For example, EPI Nursing Unit opens case in IRIS and will route case to CHS. Once PHN opens the case for investigation, the system must trigger "My Task" based on the task disposition.	Gap	Dashboards and SSRS Reports	BMI	Task 7 Dashboards for Upgraded System Task 21 Reports for Upgraded System

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SYSTEM REQUIREMENTS FOR UPGRADED SYSTEM

ITEM#	PROGRAM	REQUIREMENTS	GAP	* PROPOSED SOLUTION	** REQUIREMENTS TRACEABILITY MATRIX:	SOW REQUIREMENT TYPE:
87	VPDC - EPI	IRIS shall create VPDC specific UDF for "Facility Involvement" and shall be configured into a new tab/section for case surveillance and case management. This tab/section shall include the following data elements without limitation: <ul style="list-style-type: none"> - Facility/site name (linking to group event, incident, contact and exposure events/outbreak) - Facility type - Facility profile (e.g. total occupancy, number of staff, number of high risk, total exposed, immunization status, investigating agency, etc.) 	Not a Gap	In current WorldCare Suite, but will require configuration, which is included in Exhibit B (Statement of Work).	BC	Task 26 UDFs for Upgraded System
88	CHS/TBCP	IRIS shall create TBCP and CHS specific dashboard, alerts/reminders/notifications via email based upon status of the case, which includes the following, without limitation: <ul style="list-style-type: none"> - New tasks - Pending tasks - Status nearing due dates - Past due dates for both the nurses and supervisors. 	Gap	Dashboard and SSRS Reports	BMI	Task 7 Dashboards for Upgraded System Task 21 Reports for Upgraded System
89	TBCP	IRIS shall allow supervisors to re-assign/re-route the tasks while workers are on vacation or Out of Office (for backup or workload balance, etc.) without calling the admin to assign.	Not a Gap	In current WorldCare Suite, but will require configuration, which is included in Exhibit B (Statement of Work).	BC	Product Baseline
90	TBCP	IRIS shall enable auto-assignment of MD# (identifier) to identify county patients/case vs non-county patients.	Gap	Not in WorldCare Suite but will be created under Exhibit B (Statement of Work).	BMI	Task 26 UDFs for Upgraded System
91	VPDC - EPI/CHS/P HI	IRIS shall create VPDC specific UDF for "requesting to locate" patient, which will contain pre-defined fields and business	Not a Gap	In current WorldCare Suite, but will require configuration, which is	BC	Task 26 UDFs for Upgraded System

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ITEM#	PROGRAM	REQUIREMENTS	GAP	* PROPOSED SOLUTION	** REQUIREMENTS TRACEABILITY MATRIX:	SOW REQUIREMENT TYPE:
		rules that will support the workflow for "locating patient" by PHI and CHS.		included in Exhibit B (Statement of Work).		
92	VPDC - EPI	IRIS shall enable electronic signature functionality to allow clinicians/providers to approve and sign clinical documents through IRIS via "e-signature" feature.	Gap	<p>E-signature Proposed functionality includes:</p> <ul style="list-style-type: none"> • Create new feature for user to upload own signature for their profile. Image of signature. • Only specific forms can be signed, and who can be assigned as well as can be designated to sign for specific users. • Enter password to apply signature • Certain designated users can sign on behalf of others. Configuration will be allowed to specify which user can be assigned as a designee and which users the designee will be allowed to sign for. Use case example: Area health officers, and other positions where signatures are difficult to obtain and 	BMI	Task 9 Other Baseline Modifications for Upgraded System

ATTACHMENT D.1
SYSTEM REQUIREMENTS FOR UPGRADED SYSTEM

ITEM#	PROGRAM	REQUIREMENTS	GAP	* PROPOSED SOLUTION	** REQUIREMENTS TRACEABILITY MATRIX:	SOW REQUIREMENT TYPE:
				sometimes hold up signatures.		
93	VPDC - EPI	<p>IRIS shall create user-defined reports via SSRS or dashboard based on data collected from various UDFs or components from the six tabs (e.g. patient, clinical, epi info, lab, facility, investigation), and shall auto-generate report base on defined rules and data parameter/criteria. Report shall include without limitation the following:</p> <ul style="list-style-type: none"> - Disease workload and morbidity - Outbreak status report - Outbreak case investigation - Outbreak contact investigation - Bubble plots - EPI curves - Maps 	Gap	Dashboards and SSRS Reports	BMI	Task 7 Dashboards for Upgraded System Task 21 Reports for Upgraded System
94	VPDC - Perinatal Hep B	<p>IRIS shall enable functionality for alerts/reminders/notifications via report and/or "task" based upon case activity, which includes the following, without limitation:</p> <ul style="list-style-type: none"> - Alert when 4th dose is due (if required) - Alert for PEP Errors (> 12 hours) - Alert for past due EDD (e.g. 30 days and 60 days). 	Gap	This functionality already exists in WorldCare Suite via WorldCare Alert. Requires configuration which may require Additional Work.	TBD	TBD

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ITEM#	PROGRAM	REQUIREMENTS	GAP	* PROPOSED SOLUTION	** REQUIREMENTS TRACEABILITY MATRIX:	SOW REQUIREMENT TYPE:
95	VPDC - Perinatal Hep B	IRIS shall create user-defined reports (via SSRS or dashboard) based on data collected from various UDFs for the individual case report and shall auto-generate report base on defined rules and data parameter/criteria. Report shall include without limitation the following: - Weekly reports of EDD by case manager - Weekly reports of past due EDD by case manager - Monthly reports of 2nd and 3rd dose due by case manager - Request for mothers of infants > 15 months of age classified as "unable to contact".	Gap	Dashboards and SSRS reports and creating UDFs.	BMI	Task 7 Dashboards for Upgraded System Task 21 Reports for Upgraded System Task 26 UDFs for Upgraded System
96	VPDC - Perinatal Hep B	IRIS shall provide a functionality that allows clinician/provider/nurse the ability to manually document the patient's pregnancy status electronically (via radio button) into the lab report, and auto-assign a specific code that indicates "pregnancy status" for those lab reports transmitting electronically via ELR/CMR. The system shall incorporate rules/logic that will automatically identify those positive lab reports with pregnancy status based on auto-assigned code.	Not a Gap	WorldCare Suite currently contains a pregnancy field. Enhancements to some components of pregnancy will be addressed in WorldCare Suite version 17 via a Change Order requested by CalREDIE Team.	PB	WorldCare Suite version 17
97	VPDC - Perinatal Hep B	IRIS shall enable auto-population of standard "delivery notification" letter to enable Perinatal Hep B staff the ability to electronically notify and send the letter to the receiving hospital where the suspect/confirmed patient (mother) will be delivering. The system shall create a rule/logic that will auto-generate the "delivery notification" letter based on the Expected Delivery Date (EDD), to allow triggering of the letter one or two months before EDD for distribution.	Gap	WorldCare Suite allows UDFs to be attached. Delivery Report UDF will be developed under Exhibit B (Statement of Work).	BMI	Task 26 UDFs for Upgraded System

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SYSTEM REQUIREMENTS FOR UPGRADED SYSTEM**

ITEM#	PROGRAM	REQUIREMENTS	GAP	* PROPOSED SOLUTION	** REQUIREMENTS TRACEABILITY MATRIX:	SOW REQUIREMENT TYPE:
98	VPDC - Perinatal Hep B	<p>IRIS shall create VPDC Perinatal Hep B Preventative (PHBPU) specific UDF called "Delivery Report" to support electronic notification from the hospital to PHBPU of the HBSAg+ patient's delivery status, infant's information and infant PEP treatment information, and shall enable auto-upload into the Community Reporting module.</p> <p>IRIS shall enable auto-population of patient's demographic, lab, and related clinical information into the Delivery Report form upon creation and allows the providers/hospital the ability to document the delivery information and PEP information electronically for PHBPU tracking/monitoring.</p>	Gap	<p>WorldCare Suite's Community Reporting Module already allows UDFs to be attached and view by medical providers. Delivery Report UDF will be developed under Exhibit B (Statement of Work).</p>	BC	Task 26 UDFs for Upgraded System
99	VPDC - Perinatal Hep B	<p>IRIS shall support tracking of submitted or uploaded "Delivery Report" to ensure follow-up on patient delivery and PEP treatment for infant.</p> <p>The system shall auto-generate a report/list with rules/logic that will trigger a report/list of all HBSAg+ pregnant women without any "Delivery Report" on file (submitted by the hospital) to ensure PHBPU staff follows up with the hospital with patient delivery status. The report/list shall include without limitation the following data output/elements:</p> <ul style="list-style-type: none"> - Patient/mother (e.g. name, address, and phone) - Estimated data of delivery (EDD) - Hospital/Facility (e.g. name, address, and phone) - Provider - PEP <p>This report/list shall be used by the PHBPU to send a follow-up with the hospital or patient to confirm actual date of delivery,</p>	Gap	<p>Dashboards and SSRS Reports: 205932: 1) HBSAg+ Lab Reports</p>	BM	Task 7 Dashboards for Upgraded System Task 21 Reports for Upgraded System

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ITEM#	PROGRAM	REQUIREMENTS	GAP	* PROPOSED SOLUTION	** REQUIREMENTS TRACEABILITY MATRIX:	SOW REQUIREMENT TYPE:
		and if the mother delivered at the assigned hospital, and to ensure first dose of PEP was given to infant on timely manner.				
		IRIS shall enable auto-generation of the following documents (letters) based on business rules/logic to generate single or multiple letters on schedule, and allow user the ability to print an individual document/letter or batch printing on as needed basis for mail merge distribution. Documents/letter include without limitation:				
100	VPDC - Perinatal Hep B	<ul style="list-style-type: none"> - HBSAg+ Lab Reports - EDD Letter (specified in requirements item# 97) - HBV Doses Letter (for parent and provider) - PEP Error Report Letter (template sent to State) - PVS Testing Reminder letter (for parent and provider) - Unable to Locate letter (e.g. where are you, did you move, etc.); corresponding with the "ACCURINT" form (specified in requirements item# 102) - Transfer IN/Transfer Out forms (template sent to the State) 	Not a Gap	WorldCare Suite's letter repository and UDFs will be used to address this requirement. Delivery Report UDF will be developed under Exhibit B (Statement of Work).	BC	Task 26 UDFs for Upgraded System
101	VPDC - Perinatal Hep B	<p>IRIS shall auto-generate a "case number" (Case ID) with predefined format per individual case created/assigned/, and shall allow PHBPU the ability to assign the case to a case manager electronically, with the auto-generated case number (via "assignment" task). The "case number" (Case ID) format shall include:</p> <ul style="list-style-type: none"> - LA County code (19) with month, year and 3-digit sequential number (e.g. 19-11-17-001). 	Gap	CDPH CalREDIE/LACDPH Data Exchange to be provided under Exhibit B (Statement of Work)	BID	Task 22 CalREDIE Baseline Interface for Upgraded System

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SYSTEM REQUIREMENTS FOR UPGRADED SYSTEM**

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102	VPDC - Perinatal Hep B	<p>IRIS shall create PHBPU specific User Defined Forms (UDFs) with pre-defined fields and business rules/logic to support PHBPU case management workflow and allow the user to complete the forms (UDFs) electronically. The UDFs (forms) that are required to be created in IRIS shall include without limitation the following, and shall enable pre-population of demographic/clinical data upon generation to reduce data entry:</p> <ul style="list-style-type: none"> - Mom Case form (to replace the Mom legacy database). - ACCURINT form (template/form sent to State for "unable to locate" patient) - Hospital "Delivery Report" form (associated with requirements item# 98) - PEP Error form - In-State Case Transfer form (template/form sent to State) - Out-of-State Case Transfer form (template/form sent to State) - Lab Tracking form (data inclusive of the Table Case legacy database). This form (UDF) shall enable user the ability to enter the lab results manually for those lab reports/results that are received through fax. - Table Case form (to replace the Table Case legacy database). 	Gap	<p>WorldCare Suite's Community Reporting Module already allows UDFs to be attached and view by medical providers. Delivery Report UDF will be developed under Exhibit B (Statement of Work).</p>	BC	Task 26 UDFs for Upgraded System

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103	VPDC - Perinatal Hep B	<p>IRIS shall create aggregate reports (via SSRS or dashboard) based on data collected from various UDFs for the individual case report and shall auto-generate report based on defined rules and data parameter/criteria and shall enable reporting features that allows PHBPU to generate the following reports (via SSRS or dashboard) to support daily business operations. The following reports shall include without limitation:</p> <ul style="list-style-type: none"> - HBV Report (e.g. for second, third or fourth doses), including PVS Report - PEP Error Report (PHBPU area report for patients who missed the treatment/dose) - EDD Report (this report shall trigger alert to PHBPU when "Delivery Report" form has not been received within two weeks of the EDD). - Delivery Report for "unknown" mothers. <p>Supervisor Report which includes without limitation:</p> <ul style="list-style-type: none"> • Infants > 12 months of age who have not completed their vaccination series • Infants > 18 months of age who has not completed PVS testing • Average number of days for opening a case by case manager • # of cases assigned per month (monthly workload report) • # of cases opened per month (new or returning cases) • # of HBSAg+ status unknown delivery report (must be sorted by month received). 	Not a Gap	Dashboard and SSRS Reports	BM	Task 7 Dashboards for Upgraded System Task 21 Reports for Upgraded System

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		<ul style="list-style-type: none"> - Standard Quarterly Report, which includes without limitation: <ul style="list-style-type: none"> • Lab report received (per month and per total) for: <ul style="list-style-type: none"> - females 14-46 years of age - males and females 0-2 years of age • # of cases opened, new and returning • Number and percentage of infants: <ul style="list-style-type: none"> - that received PEP within 12 hours - that had PEP errors - completing Hep B vaccination series • Number and percentage of infants lost and need to follow-up which includes without limitation: <ul style="list-style-type: none"> - infants lost before their vaccination series - infants lost during their vaccination - infants lost after vaccination series • Number of infants "Unable to Reach" • Number of infants completing PVS Testing - PHBPU Monthly Workload and Morbidity Report 				
104	VPDC - Perinatal Hep B	IRIS shall enable functionality for "check-off" list for case closure.	Not a Gap	In WorldCare Suite: List can be generated via Ranged Reports.	PB	Task 26 UDFs for Upgraded System

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105	VPDC - Perinatal Hep B	IRIS shall enable functionality that allows PHBPU the ability to generate "Household Contact" referral to health center for appointment, and enable multiple entry of Household Contact linked to Mom's case. IRIS must have the ability to track all household contacts of the case.	Not a Gap	Functionality currently in WorldCare Suite. Requires configuration included in Exhibit B (Statement of Work).	BC	Task 26 UDFs for Upgraded System
106	VPDC - Perinatal Hep B	IRIS shall enable functionality that will allow documentation of multiple follow-up on vaccinations or PVS testing for twins or triplets Infant cases, that are linked to patient/Mom case.	Not a Gap	Functionality currently in WorldCare Suite. Requires configuration included in Exhibit B (Statement of Work).	BC	Task 21 Reports for Upgraded System Task 26 UDFs for Upgraded System
107	VPDC - Perinatal Hep B	IRIS shall create Lab report based on data output captured from the Lab Tracking Form (UDF) which shall encompass the following pre-defined fields, including without limitation: <ul style="list-style-type: none"> • Date Received (date when the unit receive the lab report) • Collection date (this is the date when lab was collected and a critical data element due to California Safety Code regulation that states Hepatitis B Antigen plus (HBsAg+) test has to be done for each pregnancy.) • Date when the unit receive the lab • Collection date (this is critical data because the California Safety Code states that Hepatitis B Antigen plus (HBsAg+) test has to be done for each pregnancy. They can't say, "oh the last time the mother was pregnant and seen at the hospital she was positive", and just rely on the last HBsAg+ test 	Gap	Dashboards and SSRS Reports: 205932: 1) HBsAg++ Lab Reports	BMI	Task 7 Dashboards for Upgraded System Task 21 Reports for Upgraded System

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ITEM#	PROGRAM	REQUIREMENTS	GAP	* PROPOSED SOLUTION	** REQUIREMENTS TRACEABILITY MATRIX:	SOW REQUIREMENT TYPE:
		<p>result). They have to perform the test for each pregnancy.</p> <ul style="list-style-type: none"> • Source where the lab came from (e.g. Quest, SunQuest, clinical, PH lab, etc.) • Type of lab • Have healthcare provider conduct additional testing to determine if mother is highly infectious. • Estimated delivery date (EDD) (can't see it on the form she presented); just for the purpose of the letter. The actual delivery date will be confirmed once the case manager talks to the mother or the hospital. • Delivery report – that the mother delivered, or if she miscarried. • Date when case was assigned to the case manager • Assigned case manager • Pregnancy status • EDD • Incident # 				
108	VPDC - Perinatal Hep B	<p>IRIS shall enable PHBPU the ability to query or sort Lab Reports based on "Date Received", and shall enable automated weekly upload of report.</p> <p>IRIS shall support tracking of cases by statuses and enable "notification" to appropriate user (e.g. PHBPU staff, CHS nursing, provider, etc.) each time the status change.</p>	Not a Gap	Functionality currently in WorldCare Suite. Alerting will be used, but also requires some configuration included in Exhibit B (Statement of Work).	BC	Task 26 UDFs for Upgraded System

ATTACHMENT D.1
SYSTEM REQUIREMENTS FOR UPGRADED SYSTEM

ITEM#	PROGRAM	REQUIREMENTS	GAP	* PROPOSED SOLUTION	** REQUIREMENTS TRACEABILITY MATRIX:	SOW REQUIREMENT TYPE:
109	PHI	IRIS shall create H-450(UDF) to enable electronic form used by the PHI when investigating TB and ACD cases. The system shall restrict access to the form only to user with PHI security roles and shall enable functionality for printing to allow PHI users to print the form on demand when subpoena by the court.	Gap	Functionality currently in WorldCare Suite. UDF will be developed. Also requires some configuration included in Exhibit B (Statement of Work).	BM	Task 9 Other Baseline Modifications for Upgraded System Task 26 UDFs for Upgraded System
110	PHI	IRIS shall create PHI specific User Defined Forms (UDFs) for STD case investigation to enable electronic documentation of STD cases by PHI. PHI UDFs (forms) shall include without limitation: <ul style="list-style-type: none"> - HDFU - Field Record - Interview Record - Contact Interview - Partner Contact 	Not a Gap	Functionality currently in WorldCare Suite. UDF will be developed. Also requires some configuration included in Exhibit B (Statement of Work).	BC	Task 26 UDFs for Upgraded System
111	PHI	IRIS shall create a multi-disciplinary UDF (H-455) to allow PHI the ability to request legal intervention from providers electronically and enable e-signature functionality for provider/discipline approval. IRIS shall support the H-455 business workflow process and rules for the review and approval process required by: <ul style="list-style-type: none"> - Supervisor Public Health Investigator - Public Health Nurse Supervisor - Area Medical Doctor - Program Epidemiologist/CDC Advisor 	Not a Gap	Functionality currently in WorldCare Suite. UDF will be developed. Also requires some configuration included in Exhibit B (Statement of Work). Requires e-signature included in Exhibit B (Statement of Work).	BM/BC	Task 26 UDFs for Upgraded System
112	PHI	IRIS shall support the storing of the sensitive occupation situation (SOS) letter.	Not a Gap	Storing the SOS letters in the EFC and "locking" functionality.	BM/BC	Task 9 Other Baseline Modifications for Upgraded System

**ATTACHMENT D.1
SYSTEM REQUIREMENTS FOR UPGRADED SYSTEM**

ITEM#	PROGRAM	REQUIREMENTS	GAP	* PROPOSED SOLUTION	** REQUIREMENTS TRACEABILITY MATRIX:	SOW REQUIREMENT TYPE:
113	PHI	IRIS shall support the business rules and workflow process associated with the different levels of review and approval needed to complete and close an investigation.	Not a Gap	Ability to create business rules and in WorldCare Suite. However, business rules and workflows will need to be configured, which is included in Exhibit B (Statement of Work).	BC	Task 26 UDFs for Upgraded System
114	PHI	IRIS shall create and support alerts and notifications to PHI, such as for notification of interview for HDFU.	Not a Gap	In WorldCare Suite, but requires configuration of alerts in WorldCare Alert.	BC	Task 9 Other Baseline Modifications for Upgraded System (e-signature)
115	PHI	IRIS shall create and support monthly aggregate and performance measured report required by the PHI.	Gap	SSRS Reports (non-dashboards).	BM	Task 21 Reports for Upgraded System
116	PHI	IRIS shall support the business workflow process of requiring a medical doctor's approval form before the PHI can start the contact investigation.	Not a Gap	In WorldCare Suite. Requires configuration of workflow and process status, which is included in Exhibit B (Statement of Work). Requires e-signature which is included in Exhibit B (Statement of Work).	BM/BC	Task 9 Other Baseline Modifications for Upgraded System (e-signature)
117	PHI	IRIS shall provide Dashboard views (custom views) of investigations' records and allow the drill down functionality into the specific record. The Dashboard view shall display records based on the business rules of security role hierarchy, such as managers will have access to all investigation records and non-manager users will have access to investigations assigned to them.	Gap (drill down)	Dashboards will be in IRIS.	BM	Task 7 Dashboards for Upgraded System

**ATTACHMENT D.1
SYSTEM REQUIREMENTS FOR UPGRADED SYSTEM**

ITEM#	PROGRAM	REQUIREMENTS	GAP	* PROPOSED SOLUTION	** REQUIREMENTS TRACEABILITY MATRIX:	SOW REQUIREMENT TYPE:
118	PHI	IRIS shall support the assignment and reassignment of PHI to investigation(s) based on the needs of the CHS Health District. The system shall support the assignment of PHI to investigation(s) that maybe outside of their assigned Business Unit/Group/Team.	Not a Gap	In WorldCare Suite.	PB	Task 26 UDFs for Upgraded System
119	PHI	IRIS shall support the capture of special outreach/group events conducted by the PHI.	Not a Gap	In World Care Suite.	PB	Task 26 UDFs for Upgraded System
120	PHI	IRIS shall support the printing of the client's labels containing the MRN to allow the PHI to adhere the label to the interview forms.	Gap	Functionality to print labels not in WorldCare Suite.	TBD	TBD
121	VPH	IRIS shall create VPH specific User Defined Forms (UDFs) with pre-defined fields and business rules to support VPH surveillance and case management workflow, and shall include VPH related fundamental forms without limitation: <ul style="list-style-type: none"> - Animal Bite Report Form - Animal Disease Report Form (all-purpose) - Rabies Specimen Submission Procedure - Suspected Rabies Animal Form - Out of Jurisdiction (OOJ) Form (to facilitate closure of cases that are OOI, and support tracking) - Lab Specimen Form for animal/human exposure - PEP Form for prophylaxis treatment for potentially exposure, which includes patient treatment disclosures, referral to CHS for PEP, if necessary, and email template for notification. - Impound and General Form (6-7 specific disease forms that can utilize the general bite report) 	Not a Gap	Functionality in WorldCare Suite version 16 to create UDFs for Vet Program.	PB/BC	Task 26 UDFs for Upgraded System
		IRIS shall enable auto-population of forms/UDFs based on data input generated by the reporting sources (e.g. Human				

**ATTACHMENT D.1
SYSTEM REQUIREMENTS FOR UPGRADED SYSTEM**

ITEM#	PROGRAM	REQUIREMENTS	GAP	* PROPOSED SOLUTION	** REQUIREMENTS TRACEABILITY MATRIX:	SOW REQUIREMENT TYPE:
		Hospitals, Veterinary Hospitals, Animal Shelters and members of the public).				
122	VPH	IRIS shall incorporate Bite Reporting functionalities that shall allow VPH staff the ability to generate report of all the rabies cases for State mandated reporting. The reports shall include without limitation: - Bite Reports - Mandatory Rabies Report - Animal Disease Report	Gap	Some functionality will be accomplished via UDFs and reports via Ranged Reports or SSRS.	BC	Task 21 Reports for Upgraded System Task 26 UDFs for Upgraded System
123	VPH	IRIS shall create VPH standard home/shelter quarantine "letters and notices to support the electronic delivery of official quarantine letters/notes to homeowners and animal shelters. and enable auto-population of data based on data information generated from the various VPH forms/UDFs (20 forms). The standard letters and/or notices shall include without limitation: - Home Quarantine letters/notices - Shelter Quarantine letters/notices	Not a Gap	Some functionality will be accomplished via UDFs and others via letter repository.	BC	Task 26 UDFs for Upgraded System
124	VPH	IRIS shall support Electronic Laboratory Reporting (ELR) and enable extraction of data for three VPH specific diseases and enable transfer of results for the three diseases into IRIS. Electronic transmission of results from two main diagnostic laboratories within the Veterinary medicine shall be supported through a streamlined portal for surveillance and case management.	Gap	After establishing ELR with two main diagnostic laboratories who currently reports results for animal diseases via fax, UDFs will be required to capture the data from ELR and developed under and in	BID	Task 26 UDFs for Upgraded System

**ATTACHMENT D.1
SYSTEM REQUIREMENTS FOR UPGRADED SYSTEM**

ITEM#	PROGRAM	REQUIREMENTS	GAP	* PROPOSED SOLUTION	** REQUIREMENTS TRACEABILITY MATRIX:	SOW REQUIREMENT TYPE:
		IRIS shall enable read and write access to VPH related cases/diseases/forms/reports based on the following user-defined security roles. Such roles shall include without limitation: <ul style="list-style-type: none"> - Five (5) Veterinarians involved in IRIS process as it relates to "bite" reporting and "animal disease" reporting. - Seven (7) Field Inspectors who perform data input and case management directly into system. - EPI Analyst - Public Health Associates - Four (4) Office Staff who performs data entry and who assigns the cases. - End users from the following four (4) entities for case reporting: <ol style="list-style-type: none"> 1. Human Hospitals 2. Veterinary Hospitals 3. Animal Shelters 4. Members of the public 			accordance with Exhibit B (Statement of Work).	
125	VPH		Not a Gap	Some functionality already exists in WorldCare Suite. Community Reporting Module to be used for external reporting sources.	BM/BC	Task 26 UDFs for Upgraded System
126	VPH	IRIS shall enable functionality that allows VPH to open/assign/re-assign bite and rabies disease cases based on "case activity" defined by business rules/logic.	Not a Gap	Functionality to open and assign VPH diseases already exists.	BC	Task 26 UDFs for Upgraded System
127	VPH	IRIS shall auto-generate a "case number" (Case ID) for each case opened/assigned.	Not a Gap	In WorldCare Suite.	PB	Task 26 UDFs for Upgraded System

**ATTACHMENT D.1
SYSTEM REQUIREMENTS FOR UPGRADED SYSTEM**

ITEM#	PROGRAM	REQUIREMENTS	GAP	* PROPOSED SOLUTION	** REQUIREMENTS TRACEABILITY MATRIX:	SOW REQUIREMENT TYPE:
128	VPH	IRIS shall create VPH specific reports (templates) for bite processing, in particular those bite reports that are generated from the 28 shelters within County, City and non-profit shelters; and enable printing of the reports (on-demand or batch printing) within IRIS to facilitate the delivery of the reports to the 28 shelters.	Not a Gap	In WorldCare Suite via Community Reporting Module and UDFs.	BC	Task 26 UDFs for Upgraded System
		IRIS shall enable access to the 28 shelters to facilitate reporting of cases through the Community Reporting module.				
129	VPH	IRIS shall facilitate closure of Out-of-Jurisdiction specimen rabies testing/hot head/PEP cases using the OOI form/UDF to support tracking of all cases sent to other jurisdiction.	Not a Gap	UDFs, SSRS report, and workflow to support tracking of cases sent out.	BC	Task 26 UDFs for Upgraded System
130	VPH	IRIS shall incorporate geocoding (Census Tract) functionality to facilitate assignment of case to the appropriate Animal Sanitation Inspectors.	Not a Gap	Geocoding and census tract functionality in WorldCare Suite.	PB	Task 26 UDFs for Upgraded System
131	VPH	IRIS shall enable functionality to allow VPH inspectors to document lab specimen request electronically and enable electronic notification of lab request, including notification of results from the DPH lab to the Veterinarian on-duty for surveillance and case management of high risk cases. IRIS shall enable printing of the lab specimen request (or label) to enable attachment of request or label to the specimen collected for specimen pick-up.	Gap (ELR)	Functionality exists in WorldCare Suite to allow documentation of lab specimen. Vet labs need to be onboarded to ELR and developed under and in accordance with Exhibit B (Statement of Work).	BID	Task 21 Reports for Upgraded System Task 26 UDFs for Upgraded System
132	VPH	IRIS shall enable functionality that will facilitate documentation and tracking of Prophylaxis (PEP) treatment recommendation for exposure cases.	Not a Gap	Some functionality already exists in WorldCare Suite. Other functionality can be accomplished via UDFs.	BC	Task 26 UDFs for Upgraded System

**ATTACHMENT D.1
SYSTEM REQUIREMENTS FOR UPGRADED SYSTEM**

ITEM#	PROGRAM	REQUIREMENTS	GAP	* PROPOSED SOLUTION	** REQUIREMENTS TRACEABILITY MATRIX:	SOW REQUIREMENT TYPE:
133	VPH/CHS	IRIS shall enable functionality that will facilitate electronic consultation and referral of exposure case to ACDC or Community Health Services (CHS) for Prophylaxis (PEP) treatment and enable electronic notification to the Veterinarian when PEP treatment is completed by CHS to facilitate closure of exposure case. IRIS shall incorporate CMAP functionality as it relates to the documentation and tracking of "case/event notes", including community outreach events and facilitate the electronic notification of PEP treatment from CHS to VPH based on process activity (e.g. ACD supervisor review, Close by CHS, etc.).	Not a Gap	Some functionality already exists in WorldCare Suite. Other functionality can be accomplished via UDFs, workflow, and creation of appropriate process statuses.	PB/BC	Task 26 UDFs for Upgraded System
134	VPH	IRIS shall support electronic recording of lab specimen results directly by DPH lab or provider and allow VPH the ability to obtain lab results real-time.	Gap (ELR)	ELR for animal diseases needs to be implemented with DPH labs to facilitate. Vet labs need to be onboarded to ELR, and UDFs will be developed to capture the data transmitted developed under and in accordance with Exhibit B (Statement of Work). Similar to Item # 131.	BID	Task 26 UDFs for Upgraded System
135	VPH	IRIS shall support electronic documentation for "Impounds" cases to enable the VPH staff/inspector the ability to document fieldwork such site visit encounters - testing the animals during the quarantine period at the shelter where the animal is impounded, case management documentation -	Gap	Current functionality not in WorldCare Suite.	BMI	Task 26 UDFs for Upgraded System

**ATTACHMENT D.1
SYSTEM REQUIREMENTS FOR UPGRADED SYSTEM**

ITEM#	PROGRAM	REQUIREMENTS	GAP	* PROPOSED SOLUTION	** REQUIREMENTS TRACEABILITY MATRIX:	SOW REQUIREMENT TYPE:
		reporting on how the animals are doing through the entire quarantine period.				
136	VPDC - Perinatal Hep B	Special Project: IRIS shall support identification of "pregnancy status" at initial lab order requisition. The program is currently working with providers and the labs to define workflow where "pregnancy status" will be captured and identified. Program has identified CDPH process for EHR with the four (4) labs where pregnancy status indicator (test code) is identified through the lab order, which may be used to support the program needs.	Not a Gap	WorldCare Suite currently contains a pregnancy field but not " at initial lab order requisition". Enhancements to some components of pregnancy will be addressed in WorldCare Suite version 17 via a Change Order requested by CalREDIE Team.	PB	WorldCare Suite version 17

**ATTACHMENT D.1
SYSTEM REQUIREMENTS FOR UPGRADED SYSTEM**

ITEM#	PROGRAM	REQUIREMENTS	GAP	* PROPOSED SOLUTION	** REQUIREMENTS TRACEABILITY MATRIX:	SOW REQUIREMENT TYPE:
137	VPDC - Perinatal Hep B	<p>Special Project: IRIS shall create "Delivery Report" UDF with pre-defined fields and business rule, and have the UDF attach to the Community Reporting module to enable access of the UDF/form with the providers who will be participating in the pilot project and with existing users of the Community Reporting module. The UDF/form shall include data information, without limitation: Mom's demographic, to ensure that test order is for current pregnancy and if mother's record exist.</p> <ul style="list-style-type: none"> - Testing that has been ordered/done. The Delivery Report UDF/form must support documentation for multiple testing for all test types, including Hep B Core Anti-body test, HBSAg, HBV DNA, and additional HBSAg lab tests done during the current pregnancy. - Information regarding the PEP of the infant, including the reason why PEP was not given to the infant if "PEP Error" is identified, the program will need to know to follow-up with State, mom and pediatrician. - Pediatrician information (e.g. name of the on-call when the baby was born), the actual pediatrician that the infant will be seeing on an on-going basis. - Hospital/Facility information where the mother delivered. 	Not a Gap	WorldCare Suite's Community Reporting Module already allows UDFs to be attached and view by medical providers. Delivery Report UDF will be developed under Exhibit B (Statement of Work).	PB/BC	Task 26 UDFs for Upgraded System

**ATTACHMENT D.1
SYSTEM REQUIREMENTS FOR UPGRADED SYSTEM**

ITEM#	PROGRAM	REQUIREMENTS	GAP	* PROPOSED SOLUTION	** REQUIREMENTS TRACEABILITY MATRIX:	SOW REQUIREMENT TYPE:
138	VPDC - Perinatal Hep B	<p>Reports: Dashboard/SSRS</p> <p>IRIS shall enable tracking of all positive (HBsAg+) lab reports in IRIS through the auto-generation of the following reports. The reports shall have pre-defined fields/columns and business rules that allows filtering of data parameter based on the data criteria used.</p> <ul style="list-style-type: none"> - positive labs of female of 14 through 46 years of age - labs of all males and females 0 through 2 years of age. <p>IRIS shall auto-generate the aforementioned reports in a lined-list report format by "Create Date" (oldest date) and shall be generated on a weekly basis - every Monday to facilitate tracking and follow-up of patient. The report shall be generated, without limitation the following data output:</p> <p>Date Lab Report Received</p> <ul style="list-style-type: none"> - Date Collected - Name of patient - DOB - Date Lab report was assigned - Case manager assigned - Source (e.g. laboratory name, collection date, type of lab) - EDD - Pregnancy Status - Disease Incident Number <p>In addition to the aforementioned reports, IRIS shall create the following reports with pre-defined fields and business rules that would allow drill-downs based on data parameters. Such reports include without limitation:</p>	Gap	Dashboards and SSRS Reports: 205932: 1) HBsAg+ Lab Reports	BMI	Task 7 Dashboards for Upgraded System Task 21 Reports for Upgraded System

ATTACHMENT D.1
SYSTEM REQUIREMENTS FOR UPGRADED SYSTEM

ITEM#	PROGRAM	REQUIREMENTS	GAP	* PROPOSED SOLUTION	** REQUIREMENTS TRACEABILITY MATRIX:	SOW REQUIREMENT TYPE:
		<p>Infants vaccine doses (e.g. 1st, 2nd and 3rd, 4th if necessary) based on due date.</p> <ul style="list-style-type: none"> - PVS testing based on due dates. - Pregnancy status report. - Unable to locate lined-list - Supervisor level reports including without limitation: <ul style="list-style-type: none"> • Infants > 12 months of age who have not completed their vaccination series • Infants > 18 months age who have not completed their PVS testing • Average number of days of open case by case manager with drill-down • for the following criteria: case assigned per month, case opened per month, # of cases with HPBAG status unknown delivery reports received. 				
139	VPDC - Perinatal Hep B	<p>Special Project: IRIS shall create standard letters/notices to facilitate the formal notification to hospital of mother's delivery date and for PEP reminder to ensure vaccination is completed on a timely manner. The letter to be created are: -Expected Delivery Date (EDD) letter - Reminder for PEP letter - Schedule for vaccination (schedule timeline) - Reminder for testing after all vaccinations are given. (Post - vaccination serology [PVS] letter).</p>	Gap	Some functionality exists in WorldCare Suite others will need to be developed under Exhibit B (Statement of Work).		Task 26 UDFs for Upgraded System (Letter Repository)
IRIS shall enable electronic printing of the aforementioned						

**ATTACHMENT D.1
SYSTEM REQUIREMENTS FOR UPGRADED SYSTEM**

ITEM#	PROGRAM	REQUIREMENTS	GAP	* PROPOSED SOLUTION	** REQUIREMENTS TRACEABILITY MATRIX:	SOW REQUIREMENT TYPE:
		letters to allow programs to print letters and feed into RightFax to send out to the hospital/providers. Slide# 38 shows example of the letters.				
		IRIS shall incorporate features that will support workflow for tracking type of letter sent, to whom (e.g. hospital, provider, mom, etc.) the letter is sent, and the date when the letter is sent.				
140	VPDC - Perinatal Hep B	Special Project: IRIS shall support data transfer (FTP file) to State through data export to facilitate transmission of case data required for State reporting.	Gap	CDPH CalREDIE/LACDPH Data Exchange to be developed under and in accordance with Exhibit B (Statement of Work).	BID	Task 22 CalREDIE Baseline Interface for Upgraded System

ATTACHMENT D.1
SYSTEM REQUIREMENTS FOR UPGRADED SYSTEM

ITEM#	PROGRAM	REQUIREMENTS	GAP	* PROPOSED SOLUTION	** REQUIREMENTS TRACEABILITY MATRIX:	SOW REQUIREMENT TYPE:
141	VPDC - Perinatal Hep B	<p>Special Project: IRIS shall enable functionality to capture and generate the State mandated "case number" format: LA County code-MM-DD-Seq Number (e.g. 19-11-17-002). The case number is a State mandated number that is used to track the case by the program and State.</p>	Gap	<p>CDPH CalREDIE/LACDPH Data Exchange to be developed under and in accordance with Exhibit B (Statement of Work).</p>	BID	<p>Task 22 CalREDIE Baseline Interface for Upgraded System</p>
142	VPDC - Perinatal Hep B	<p>Special Project: IRIS shall support email encryption of data from IRIS to allow message distribution via email to provider or parent. Current WorldCare Suite only allows sending of messages within the system (without PHI data).</p>	Gap	<p>Under current County policy, PHI data cannot be sent via email. If there is a change in County policy, then Parties will determine whether in Tasks 1-26 or Task 30 of the Statement of Work.</p>	TBD	TBD

**ATTACHMENT D.1
SYSTEM REQUIREMENTS FOR UPGRADED SYSTEM**

ITEM#	PROGRAM	REQUIREMENTS	GAP	* PROPOSED SOLUTION	** REQUIREMENTS TRACEABILITY MATRIX:	SOW REQUIREMENT TYPE:
143	VPDC - Perinatal Hep B	Special Project: IRIS shall enable feature for "restriction of VIP file" based on jurisdiction (district) and disease. Data for restriction may include without limitation PHI legal orders and those documents related to under age child, which can only be seen by certain DHSP users. Data Related Specifications: IRIS shall support seven (7) years of data retention based on programs' needs, and shall ensure quality of data is appropriate for retention. Process must be defined in IRIS for those existing records to eliminate duplication: - Find where there's a match with existing data from legacy database and IRIS. - Create those that do not have match in IRIS. - Add additional information for those that are in the system.	Gap	IRIS Locking/prevent access to specific files in EFC.	BMI	Task 9 Other Baseline Modifications for Upgraded System (EFC Locking Functionality)
144	VPDC - Perinatal Hep B	Data Related Specifications: IRIS shall migrate seven (7) years' worth of data from Table Case and Mom Case combined with approximately 400 fields and 10-20 thousand records from each legacy database. VPDC Perinatal Hep B program must have the ability to access all records and available regardless of record aging to support CDC case studies.	Not a Gap	VPDC Perinatal Hep B unit are current users of the IRIS. However, data from legacy databases are maintained outside of IRIS.	BMI	Task 13 Data Conversion and Migration (EPI)
145	VPDC - Perinatal Hep B	Data Related Specifications: IRIS shall migrate seven (7) years' worth of data from Table Case and Mom Case combined with approximately 400 fields and 10-20 thousand records from each legacy database. VPDC Perinatal Hep B program must have the ability to access all records and available regardless of record aging to support CDC case studies.	Gap	VPDC Perinatal Hep B unit are current users of the IRIS. UDFs will be developed to capture data from Table Case and Mom Case databases under and in accordance with Exhibit B (Statement of Work).	BMI	Task 26 UDFs for Upgraded System

**ATTACHMENT D.1
SYSTEM REQUIREMENTS FOR UPGRADED SYSTEM**

ITEM#	PROGRAM	REQUIREMENTS	GAP	* PROPOSED SOLUTION	** REQUIREMENTS TRACEABILITY MATRIX:	SOW REQUIREMENT TYPE:
146	VPDC - Perinatal Hep B	Data Related Specifications: IRIS shall create one set of UDF (based on existing CDPH UDF forms) and add few pre-defined fields to support and accommodate some of the changes from State. UDF shall include the following data fields without limitation: - Outreach - Out of State	Gap	CDPH UDFs are already exist in WorldCare Suite.	BC	Task 26 UDFs for Upgraded System
147	VPDC - EPI	Special Projects: IRIS shall incorporate an algorithm for determining threshold for certain number of diseases for an individual geographic area, and allow linkage to the facility module. The algorithm shall include logic for alerting program when threshold is reached for the individual disease based on data parameters and geographic area (facility), and allow search program the ability to search by facility name and/or type.	Not a Gap (Threshold Analysis)	Threshold Analysis and alerting functionality are currently in WorldCare Suite and will be configured to address this requirement under Exhibit B (Statement of Work).	BC	Task 26 UDFs for Upgraded System
148	VPDC - EPI	Special Projects: IRIS shall support bi-directional data exchange (interface) from other facilities for high-risk information - update of case investigation reporting.	Gap (Bi-directional exchange of data)	TBD	TBD	TBD
149	VPDC - EPI	Special Projects: IRIS shall enable an auto-dial/auto-call feature to allow communication with health services and allow the program to leave messages to the provider (e.g. AOD, AHO, AMD, CHS, etc.) for high-profile incident/case that require immediate attention/action.	Gap	TBD	TBD	TBD

**ATTACHMENT D.1
SYSTEM REQUIREMENTS FOR UPGRADED SYSTEM**

ITEM#	PROGRAM	REQUIREMENTS	GAP	* PROPOSED SOLUTION	** REQUIREMENTS TRACEABILITY MATRIX:	SOW REQUIREMENT TYPE:
150	VPDC - EPI	Special Projects: IRIS shall support bi-directional interface with California Immunization Registry (CAIR) to allow tracking of patient's vaccination records.	Gap	TBD	TBD	TBD
151	VPDC - EPI	Special Projects: IRIS shall enable direct interface with "RightFax" server to allow electronic transmission of reports, letters and notices from programs, health agency providers directly within IRIS.	Gap	RightFax	BID	Task 8 Specified Baseline Interfaces for Upgraded System
152	VPDC - EPI	Special Projects: IRIS shall generate a report of all patients that are unable to locate and support the program in the facilitating of the request for ACCURINT search to the State.	Gap	Dashboards and SSRS Reports	BMI	Task 7 Dashboards for Upgraded System Task 21 Reports for Upgraded System
153	VPDC - EPI	Special Projects: IRIS shall enable feature that will auto-generate surveillance calendar with the individual staff schedule, and create a business rule/logic for an algorithm that will auto-calculate the number of days individual staff was on for the month (e.g. days off for the month and the average number of off days for equitable distribution of cases to investigator during high-volume days, etc.), and auto-assign case to an individual investigator based parameters defined through the algorithm. Data parameters for defining the algorithm shall include without limitation: <ul style="list-style-type: none"> - Average number of days each staff has been on-duty schedule each month, within five-month period. - Individual staff "out-of-office" schedule for the upcoming month. 	Gap	Need to enhance calendar functionality already in WorldCare Suite. If desired by County, will be acquired as Additional Work under and in accordance with Exhibit B (Statement of Work).	TBD	TBD

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SYSTEM REQUIREMENTS FOR UPGRADED SYSTEM**

ITEM#	PROGRAM	REQUIREMENTS	GAP	* PROPOSED SOLUTION	** REQUIREMENTS TRACEABILITY MATRIX:	SOW REQUIREMENT TYPE:
154	VPDC - EPI	Special Projects: IRIS shall add "due date" variable into the Task List to streamline process to comply with program standards.	Gap	Need to add due date to task functionality in WorldCare Suite under Exhibit B (Statement of Work).	BMI	Task 26 UDFs for Upgraded System
155	VPDC - EPI	Special Projects: IRIS shall generate an EPI Curve map with "Bubble Plot" for tracking outbreaks.	Gap	Dashboards and SSRS Reports	BMI	Task 7 Dashboards for Upgraded System Task 21 Reports for Upgraded System
156	VPDC - EPI	Data Related Specifications: 15 years' worth of data shall be migrated into IRIS and shall retain 15 years prior of historical data archived in data warehouse; and shall allow easy access of archived data by the program. Data volume for storage shall include complete data from 1997 with more than 10-20 years of data with approximately 5-10 thousand records with mass data.	Not a Gap	VPDC Access databases will be migrated.	BMI	Task 13 Data Conversion and Migration

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SYSTEM REQUIREMENTS FOR UPGRADED SYSTEM**

ITEM#	PROGRAM	REQUIREMENTS	GAP	* PROPOSED SOLUTION	** REQUIREMENTS TRACEABILITY MATRIX:	SOW REQUIREMENT TYPE:
157	VPDC - EPI	<p>Reports: Dashboard/SSRS</p> <p>IRIS shall create VPDC EPI related case management reports with pre-defined filter parameters (e.g. drill-down) and business logic to run and display report. These reports shall include without limitation the following:</p> <ol style="list-style-type: none"> 1. Line list of all VPDC specific disease incidents with drill-down parameters (e.g. pending for certain # of days, not routed to CHS, pending VPDC lab tests from PHL, VRDL, or commercial lab, etc.) 2. Line List of case counts with key parameters for drill-down to display case by: <ol style="list-style-type: none"> a. Facility b. Counts by year (based on date received/created?) c. Disease d. Status/Disposition 3. Line list of all VPDC specific outbreak incidents with drill-down parameters. 4. Dashboard/SSRS case counts of VPDC specific disease, (with filter parameter to select disease) and auto-generate pie chart for the current year based on disease. 5. Dashboard showing all VPDC cases by SPA, Supervisorial District and Health District. 6. Dashboard showing all Contact Investigation 	Gap	Dashboards and SSRS Reports	BMI	Task 7 Dashboards for Upgraded System Task 21 Reports for Upgraded System

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SYSTEM REQUIREMENTS FOR UPGRADED SYSTEM**

ITEM#	PROGRAM	REQUIREMENTS	GAP	* PROPOSED SOLUTION	** REQUIREMENTS TRACEABILITY MATRIX:	SOW REQUIREMENT TYPE:
158	TBCP	Special Project: IRIS shall enable functionality to facilitate import of electronic data output file from EDM for B4/B3 notification of Refugee Class 1 and 2 cases (which are approximately 1,500 received a year) from CDC through the Community Reporting module. Import process shall include data importation of genotype data.	Gap	UDFs and Community Reporting Module can be used, but need more specifications regarding how genotype data will be acquired to be completed under Exhibit B (Statement of Work).	BMI	Task 26 UDFs for Upgraded System
159	TBCP	Special Project: IRIS shall enable functionality to facilitate import from genotype management system to support genotyping of TBCP related investigations and enable mapping to appropriate Geno-type cluster.	Gap	Need to develop UDF to capture the fields being imported from genotype management system.	BC	Task 26 UDFs for Upgraded System
160	TBCP	Special Project: IRIS shall incorporate functionality that allows electronic activity update of TB suspect from provider (e.g. private provider at health facilities) which shall trigger a task to comply with the 7-day period update criteria for case completion and/or closure.	Gap	Some electronic activity and task capabilities already exist in WorldCare Suite. May need to enhance WorldCare Suite to facilitate compliance with the 7-day period criteria.	TBD	TBD
161	TBCP	Special Project: IRIS shall incorporate "gateway" functionality that will allow direct interface of ORCHID clinical encounter data required for program reporting, case management and disease surveillance.	Gap	ORCHID Interface	BID	Task 23 ORCHID Baseline Interface for Upgraded System

**ATTACHMENT D.1
SYSTEM REQUIREMENTS FOR UPGRADED SYSTEM**

ITEM#	PROGRAM	REQUIREMENTS	GAP	* PROPOSED SOLUTION	** REQUIREMENTS TRACEABILITY MATRIX:	SOW REQUIREMENT TYPE:
162	TBCP	Special Project: IRIS shall enable feature for "Red Flagging" high incident cases and suspects by enabling automatic alert and/or email notification to specific user group for immediate evaluation or follow-up and enable an SSRS report that would define those high related incident cases based on disease related significance.	Gap	SSRS Reports	BM	Task 21 Reports for Upgraded System
163	TBCP	Special Projects: IRIS shall enable functionality that allows the program to send email to AHO, AMD or other nursing staff for questions. The system must allow posting of questions for a particular case via email notification to alert the individual AHO, AMD, nursing staff that a message/question has been sent/posted for their review and evaluation.	Not a Gap	In WorldCare Suite version 16 requires configuration included in Exhibit B (Statement of Work).	BC	Task 26 UDFs for Upgraded System
164	TBCP	Special Projects: IRIS shall enable functionality that allows the program to facilitate home assessment through enabling tasks that will trigger email notification and dashboard based on hospital reporting of H-300 to ensure completion of task is accomplished within a specific time period, (e.g. protocol for 24/48-hour rule for discharge).	Gap	Some functionality exists in WorldCare Suite others will need to be developed under Exhibit B (Statement of Work).	BM	Task 26 UDFs for Upgraded System
165	TBCP	Special Project: IRIS shall incorporate direct transmission of RVCT report from IRIS to CDPH CalREDIE, and create an RVCT form/UDF that will facilitate the transmission of RVCT data for reporting. The system shall enable auto-population of data from the disease incident form/UDF into the RVCT form/UDF automatically.	Gap	RVCT via UDF or SSRS Report possible solutions	BC	Task 26 UDFs for Upgraded System Task 21 Reports for Upgraded System

**ATTACHMENT D.1
SYSTEM REQUIREMENTS FOR UPGRADED SYSTEM**

ITEM#	PROGRAM	REQUIREMENTS	GAP	* PROPOSED SOLUTION	** REQUIREMENTS TRACEABILITY MATRIX:	SOW REQUIREMENT TYPE:
166	TBCP	Report: Dashboard/SSRS IRIS shall generate a report that will allow AMD and PHN to facilitate quarterly "Cohort Review" of all completed TB related contacts investigations from prior quarter and incorporate a hyperlink within the lined list report to allow the program to access the individual patient's contact/case investigation for review via form or UDF.	Gap	UDF and SSRS Reports	BMI	Task 21 Reports for Upgraded System Task 26 UDFs for Upgraded System
167	TBCP	IRIS shall enable an alert functionality to notify Area Medical Director (AMD) and CHS Nursing when status is "Ready for COHORT Review". Special Project: IRIS shall incorporate inbound and outbound jurisdictional referral and notification in order to facilitate the "jurisdictional transfer" of patient, and enable auto-population of data onto the outbound jurisdiction notification for delivery.	Gap	Inbound and outbound messaging functionality exists in WorldCare Suite. Jurisdictional referral may need to be enhanced to meet this specific need.	TBD	TBD
168	TBCP	Special Project: IRIS shall enable functionality that allows program the ability to identify exposure site for contact investigation, including ability to identify secondary level setting associated to the contact site (e.g. classroom, dorm room, band room, 12A, etc.) to support the facilitation of contact investigation.	Not a Gap	Functionality currently in WorldCare Suite. Requires Configuration.	BC	Task 26 UDFs for Upgraded System

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SYSTEM REQUIREMENTS FOR UPGRADED SYSTEM**

ITEM#	PROGRAM	REQUIREMENTS	GAP	* PROPOSED SOLUTION	** REQUIREMENTS TRACEABILITY MATRIX:	SOW REQUIREMENT TYPE:
169	TBCP	<p>Report: Dashboard/SSRS</p> <p>IRIS shall generate dashboard including SSRS report and drill-down for the following without limitation:</p> <ul style="list-style-type: none"> - Ready Cohort Review - Red Flag list - Tasks List - Case/Suspect line list (productivity report) - Clusters Listing 	Gap (drill down)	Dashboards and SSRS reports and creating UDFs. Specifications for drill down will need to be provided.	BMI	Task 7 Dashboards for Upgraded System Task 21 Reports for Upgraded System Task 26 UDFs for Upgraded System
170	TBCP	<p>Data Related Specifications:</p> <p>IRIS must support the migration of approximately 600-700 thousand records from TRIMS legacy system into IRIS and allow accessing of historical data without limiting retention period.</p> <p>Program has proposed having its own data warehouse inclusive of historical data and upload new data from IRIS into the data warehouse to facilitate monitoring and reporting of data to State, and allow querying of data on-demand as needed.</p>	Gap	Data Conversion and Migration	DCM	Task 13 Data Conversion and Migration
171	DHSP	<p>Special Project:</p> <p>IRIS shall enable Community Reporting module to support electronic case reporting capability for HIV and STD, and enable functionality that allows the program to access and query SQL data for surveillance.</p>	Not a Gap	ATLAS EHR Gateway	PB	Task 25 Electronic Health Record Gateway Application
172	DHSP	<p>Special Project:</p> <p>IRIS shall support direct submission of case data to State by enabling feature for automating the validation process of data.</p>	Gap	CDPH CalREDIE LACDPH Data Exchange.	BID/BM	Task 22 CalREDIE Baseline Interface for Upgraded System

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ITEM#	PROGRAM	REQUIREMENTS	GAP	* PROPOSED SOLUTION	** REQUIREMENTS TRACEABILITY MATRIX:	SOW REQUIREMENT TYPE:
173	DHSP	<p>Special Project: IRIS shall enable restriction of access for certain data information within the patient's chart and allow only specific user group the ability to access/view that information. Information requiring restriction include without limitation:</p> <ul style="list-style-type: none"> - Booking number (any relevant custody data information) - Mental Health - Substance Abuse - Social Services (for Perinatal Hep B) - H-455 UDF 	Gap	EFC currently in WorldCare Suite, but this specific functionality does not exist. Locking/prevent access to specific files in EFC will be developed under Exhibit B (Statement of Work).	BMI	Task 9 Other Baseline Modifications for Upgraded System
174	DHSP	<p>Special Project: IRIS shall enable functionality that allows the individual discipline (e.g. PHN, PHI, etc.) the capability to search by specific notes based on job function parameters; and, system shall generate list of notes chronologically. For example, user select PHI notes on search and system will generate only the PHI notes based on chronological event.</p>	Gap	Some functionality exists in WorldCare Suite others may need to be developed.	TBD	TBD
175	DHSP	<p>Special Project: IRIS shall enable "cloning" of incident information for multiple disease incidents for one morbidity. For example, STD incident case is created for Chlamydia for an individual patient, and another incident case created for gonorrhea. The information from initial incident should be copied or transmitted to the other incident to eliminate entering the same data information.</p>	Gap	Some functionality exists in WorldCare Suite others will need to be developed under Exhibit B (Statement of Work).	BMI	Task 26 UDFs for Upgraded System

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SYSTEM REQUIREMENTS FOR UPGRADED SYSTEM**

ITEM#	PROGRAM	REQUIREMENTS	GAP	* PROPOSED SOLUTION	** REQUIREMENTS TRACEABILITY MATRIX:	SOW REQUIREMENT TYPE:
176	DHSP	<p>Special Project: IRIS shall enable functionality that will facilitate "ELR messaging" when ELR data information is updated and enable an alert that will notify the program when a revised ELR is received in the system.</p>	Not a Gap	This functionality already exists in WorldCare Suite via WorldCare Alert. Requires configuration under Exhibit B (Statement of Work).	BC	Task 26 UDFs for Upgraded System
177	DHSP	<p>Report: Dashboard/SSRS IRIS shall create the following dashboard, without limitation, which may include line-list and drill-down filter parameter:</p> <ul style="list-style-type: none"> - Task list (any assigned tasks) - Lab results (e.g. lab confirmation, negative results with configured time period) and confirmation assigned to "my cases" within the last <date TBD> views/dashboard. - Dashboard views similar to CMAP dashboard views must be incorporated into IRIS and have each dashboard views specific to user roles, (e.g. My Case load-based on process status, what has been assigned, closed, pending, overview of all caseloads for other staff, how many cases are beyond the closure criteria, how many cases are with PHI, AMD, Supervisor, etc.) - Dashboard notification for audit or updated information by staff (e.g. clinic staff adding treatment information, medical record#, etc.). - Workflow Monitoring (IssueTrak created for this and process status) - Performance Measures reports - Social network dashboard - Sexual network dashboard 	Gap	Dashboards and SSRS	BMI	Task 7 Dashboards for Upgraded System Task 21 Reports for Upgraded System

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SYSTEM REQUIREMENTS FOR UPGRADED SYSTEM**

ITEM#	PROGRAM	REQUIREMENTS	GAP	* PROPOSED SOLUTION	** REQUIREMENTS TRACEABILITY MATRIX:	SOW REQUIREMENT TYPE:
		Special Project: IRIS shall refine advance search feature to include the following search parameters without limitation, and allow program to search by multiple/combo criteria (same requirement as VPDC Epi): - Specimen ID - Age And enable displays of data with the most recent record created on the top (ascending order).		Advance Search currently in WorldCare Suite. Multiple search options added to WorldCare Suite version 17 by CalREDIE.	PB	Product Baseline and WorldCare Suite version 17
178	DHSP	Special Project: IRIS shall support migration of seven (7) years of non-syphilis data and enable link within IRIS that allow the program access to historical data for the additional years.	Gap	Data Conversion and Migration	DCM	Task 13 Data Conversion and Migration
179	DHSP	Special Project: IRIS security shall be enhanced to restrict user from selecting the "back button" when in the Foodborne Illness (FBI) tab to prevent the user from getting locked-out from the system.	Gap	May need to enhance existing FBI in WorldCare Suite.	TBD	TBD
180	ACDC	Special Project: Program request a correction of defects to current IRIS to have the user return to previous page and prevent the user from returning to the main search page when clicking cancel or back button.	Gap	System defect. Will be corrected in a future release in accordance with Exhibit F (Service Level Requirements).	Provide SLR	Task 27 Provide Maintenance Services
181	ACDC	Special Project: IRIS shall configure the system to support monitoring and performance with "Most Recent Viewed" records to prevent users from being locked-out of the system.	Gap	Will be corrected in a future release in accordance with Exhibit F (Service Level Requirements).	Provide SLR	Task 27 Provide Maintenance Services
182	ACDC		Gap		Provide SLR	Task 27 Provide Maintenance Services

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ITEM#	PROGRAM	REQUIREMENTS	GAP	* PROPOSED SOLUTION	** REQUIREMENTS TRACEABILITY MATRIX:	SOW REQUIREMENT TYPE:
183	ACDC	Special Project: Program request an enhancement to current IRIS, to add "Search" variables and modify the display results to include without limitation: <ul style="list-style-type: none"> - Food Source (alphabetical order) - Create Date (date when FBI complaint is entered) - Site# (move column to display to the right value is not used by ACDC, but may be used by Environmental program.) - Diagnosis IRIS shall add "Create Date" (before Site#) to the header column (grid).	Gap	Will be corrected in a future release in accordance with Exhibit F (Service Level Requirements).	Provide SLR	Task 27 Provide Maintenance Services
184	ACDC	Special Project: Program request an enhancement to current IRIS to remove logic for adding "other symptoms" to the dictionary to limit the search values when scrolling through the list for selection.	Gap	Will be corrected in a future release in accordance with Exhibit F (Service Level Requirements).	Provide SLR	Task 27 Provide Maintenance Services

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ITEM#	PROGRAM	REQUIREMENTS	GAP	* PROPOSED SOLUTION	** REQUIREMENTS TRACEABILITY MATRIX:	SOW REQUIREMENT TYPE:
185	ACDC	<p>Special Project: IRIS shall enable "alert" feature when disease category is changed or updated to notify program when disease is changed for the individual patient record and shall incorporate the following logic and configuration to facilitate the change request:</p> <ul style="list-style-type: none"> - Modify logic for sending out an alert when a New Record is created and when disease is changed for an individual record. - Add logic to determine when alert is triggered for a disease change (e.g. if logic is set to "False", then current logic with NO Alert is executed.) - Disease change alerts to be applied for Disease Incidents, Outbreaks and Animal Reports. 	Not a Gap	Alert functionality currently in WorldCare Suite version 16. However, requires WorldCare Alert configuration under Exhibit B (Statement of Work).	BC	Product Baseline and Configuration
186	ACDC	<p>Special Project: Program request an enhancement to modify the "District Review" views and add additional variables such as "city" (for look-up) in the District Review grid to allow users the ability to filter their views based on variables selected.</p>	Gap	Will be addressed in a future release yet TBD. This is hard-coding so it may require modifications.	TBD	TBD

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ITEM#	PROGRAM	REQUIREMENTS	GAP	* PROPOSED SOLUTION	** REQUIREMENTS TRACEABILITY MATRIX:	SOW REQUIREMENT TYPE:
		Report: Dashboard/SSRS IRIS shall create CHS related case management reports with pre-defined filter parameters (e.g. drill-down) and business logic to run and display reports. These reports shall include without limitation the following: <ul style="list-style-type: none"> - Caseload report (month worth of the "specific disease") with date range from current date. - EPI curve for ACD Enteric group and Vector borne disease with user pre-defined filter. - Diseases with increased incidents based on current week. 	Gap	Dashboards and SSRS Reports	BMI	Task 7 Dashboards for Upgraded System Task 21 Reports for Upgraded System
187	ACDC					
188	ACDC	Data Related Specifications: Program requested to have data upload and have corresponding UDF for match into IRIS.	Not a Gap	Functionality and UDFs exists in WorldCare Suite. Need to be configured under Statement of Work.	BC	Task 26 UDFs for Upgraded System
189	VPH	Special Project: IRIS shall create VPH specific UDFs for Animal Bite and Animal Disease with pre-defined fields and business rules.	Not a Gap	Functionality and UDFs exists in WorldCare Suite. Need to be configured under Statement of Work.	BC	Task 26 UDFs for Upgraded System
190	VPH	Special Project: IRIS shall support the facilitation of three (3) VPH reports from the Electronic Laboratory Reporting (ELR) and enable manual extraction and entry of data. Special Project: IRIS shall generate lab results and animal reporting based on submission through the staging and enable review of lab data for parsing.	Gap (ELR)	Requires establishing an ELR connection with labs.	TBD	TBD
191	VPH		Gap (ELR)	Requires establishing an ELR connection with labs.	TBD	TBD

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ITEM#	PROGRAM	REQUIREMENTS	GAP	* PROPOSED SOLUTION	** REQUIREMENTS TRACEABILITY MATRIX:	SOW REQUIREMENT TYPE:
192	VPH	Special Project: IRIS shall support 50 disease reports.	Not a Gap	Can add new diseases including animal disease to WorldCare Suite's disease dictionary. This requires configuration under the Statement of Work.	BC/PB	Product Baseline Configuration (Disease Dictionary)
193	VPH	Special Project: IRIS shall enable functionality that allows the program to generate bite report forms without limitation: - Animal Control Bite Report form - Medical Bite Report form - Veterinarian Bite Report form - Wild Animal vs. Domestic Bite Report form - LACDPH Online Portal - Bite Report form	Not a Gap	UDFs and SSRS Report	BC	Task 26 UDFs for Upgraded System Task 21 Reports for Upgraded System
194	VPH	Special Project: IRIS shall support case assignment based on geography coding.	Not a Gap	In WorldCare Suite version 16 (Supervisory District only). However, this must be configured under Statement of Work.	BC/PB	Product Baseline (Geocoding)
195	VPH	Special Project: IRIS support two levels of review and approval process.	Gap	E-signature Proposed functionality includes: • Create new feature for user to upload own signature for their profile. Image of signature. • Only specific forms can be signed, and who can be assigned as well as can be	BMI	Task 9 Other Baseline Modifications for Upgraded System (e-signature)

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ITEM#	PROGRAM	REQUIREMENTS	GAP	* PROPOSED SOLUTION	** REQUIREMENTS TRACEABILITY MATRIX:	SOW REQUIREMENT TYPE:
				designated to sign for specific users. <ul style="list-style-type: none"> • Enter password to apply signature • Certain designated users can sign on behalf of others. Configuration will be allowed to specify which user can be assigned as a designee and which users the designee will be allowed to sign for. Use case example: Area health officers, and other positions where signatures are difficult to obtain and sometimes hold up signatures.		
196	VPH	Special Project: IRIS shall enable functionality that allows extracting of data from email reports to reduce manual entry.	Gap	Some functionality already in WorldCare Suite. Other functionality may need development.	TBD	TBD
197	VPH	Special Project: IRIS shall support animal-to-animal(s) linkage - similar to TB Index to Contacts.	Not a Gap	Some functionality already in WorldCare Suite. Other functionality will need development under Statement of Work.	BMI	Task 26 UDFs for Upgraded System

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ITEM#	PROGRAM	REQUIREMENTS	GAP	* PROPOSED SOLUTION	** REQUIREMENTS TRACEABILITY MATRIX:	SOW REQUIREMENT TYPE:
198	VPH	<p>Special Project:</p> <p>IRIS shall support VPH specific Outbreak/Animal workflow and enable functionalities that allow VPH program to facilitate Outbreak case investigation and management:</p> <ul style="list-style-type: none"> - Enabling users the ability to create animal OB and link to multiple victims (humans or animals). - Enabling auto-population of Outbreak information onto each victim (animal or human). - Add "Other" (or Veterinary) to Facility Type and auto-generation of Outbreak ID numbers. 	Gap	<p>Some functionality already exists in WorldCare Suite. Other functionality will need development under Statement of Work.</p>	BMI	Task 26 UDFs for Upgraded System
199	VPH	<p>Special Project:</p> <p>IRIS shall enable feature that will support animal linkage to group event.</p>	Gap	<p>Some functionality already in WorldCare Suite. Other functionality will need development under Statement of Work.</p>	BMI	Task 26 UDFs for Upgraded System
200	VPH	<p>Special Project:</p> <p>IRIS shall provide an online portal for Vet shelters and Vet clinics to enable them to report and view their records (there are about 28 Veterinary shelters across LA City and County).</p>	Not a Gap	<p>Exists in WorldCare Suite via Community Reporting Module and UDFs.</p>	BC	Task 26 UDFs for Upgraded System
201	VPH	<p>Special Project:</p> <p>IRIS shall enable an "alert" feature that will facilitate notification to VPH program of rabies positive specimen and any related update corresponding to results.</p>	Not a Gap	<p>In WorldCare Suite version 16. Requires WorldCare Alert Configuration under Exhibit B (Statement of Work).</p>	BC/PB	Product Baseline Configuration (Alerting)
202	VPH	<p>Special Project:</p> <p>IRIS shall have case definition pop-up window to display instructions/information based on user-defined rule.</p>	Not a Gap	<p>Pop-ups in WorldCare Suite. VPH needs to provide language for case definition pop-up windows.</p>	BC	Task 26 UDFs for Upgraded System / Business Rule

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ITEM#	PROGRAM	REQUIREMENTS	GAP	* PROPOSED SOLUTION	** REQUIREMENTS TRACEABILITY MATRIX:	SOW REQUIREMENT TYPE:
203	VPH	Special Project: IRIS shall provide an online portal that allows the public to submit online bite report (similar to FBI public page) and enable auto-population of data onto appropriate User Defined Forms (UDFs).	Gap (No on-line portal for public reporting)	On-line portal that allows the public to submit bite reports may need to be developed. SSRS reports may also need to be developed.	TBD	TBD
204	VPH	Special Project: IRIS shall enable feature that will support geocode mapping to locate the owner/person who is in charge of the animals.	Gap	Some geocoding/mapping capability in WorldCare Suite (Enhanced Geographical Mapping). Other functionality may need to be developed.	TBD	TBD
205	VPH	Special Project: IRIS shall enable feature that allow VPH program the ability to search distinct variables, without limitation: - Victim - Owner - Location - Impound number	Not a Gap	Functionality in WorldCare Suite version 16	PB	Product Baseline (Search Ability)
206	VPH	Special Project: IRIS shall incorporate Animal reports to Custom Exports.	Not a Gap	Custom Export functionality in WorldCare Suite version 17	PB	WorldCare Suite version 17
207	VPH	Special Project: IRIS shall enable auto-generation of letters and notices to support the electronic delivery. Letters and notices includes, without limitation: - Home quarantine - Shelter quarantine	Not a Gap	Some functionality in WorldCare Suite via letter repository and UDFs.	BMI	Task 26 UDFs for Upgraded System

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ITEM#	PROGRAM	REQUIREMENTS	GAP	* PROPOSED SOLUTION	** REQUIREMENTS TRACEABILITY MATRIX:	SOW REQUIREMENT TYPE:
208	VPH	Special Project: Program request enhancement to current IRIS to disable the Vector tab since the module is not being utilized by the program.	Not a Gap	Vector is hardcoded and may be needed by other DPH Programs. However, we will explore hiding this tab.	TBD	TBD
209	VPH	Special Project: IRIS shall enable monitoring feature that enables case quality control for incomplete reports and error detection.	Gap	WorldCare Suite has some of this capability. Other functionality may need to be developed.	TBD	TBD
210	VPH	Reports: Dashboard/SSRS IRIS shall create the following dashboard, without limitation, which may include line-list and drill-down filter parameter: - View of case volume based on Open and Closed cases per investigator - Daily monitoring/audit activity and case management	Not a Gap	Dashboards and SSRS Report. Gap (drill-down).	BMI	Task 7 Dashboards for Upgraded System
212	CHS PHN/PHI	Data Related Specifications: IRIS shall migrate all of data including attachments from CMAP legacy system to IRIS.	Gap	Data Conversion and Migration	DCM	Task 13 Data Conversion and Migration
213	CHS PHN	Reports: Dashboard/SSRS: IRIS shall create CHS related case management reports with pre-defined filter parameters (e.g. drill-down) and business logic to run and display report. These reports shall include without limitation the following: Active Cases by SPA - Case Status - Closed Case - Active Case by Program - Active Cases vs. Outbreaks/TB Exposure Site - Active Cases by Priority	Gap	Dashboards and SSRS Reports	BMI	Task 7 Dashboards for Upgraded System Task 21 Reports for Upgraded System

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ITEM#	PROGRAM	REQUIREMENTS	GAP	* PROPOSED SOLUTION	** REQUIREMENTS TRACEABILITY MATRIX:	SOW REQUIREMENT TYPE:
214	CHS PHN/PHI	Special Project: IRIS shall support the capture and reporting of all the users that contributed to the completion of the investigation. For example, when case is transferred by the CHS PHN to PHI for locate or compliance. The PHI efforts are not noted on the case assignment/workload when the case is returned to the CHS PHN after location and compliance completed by the PHI.	Not a Gap	CHS nurses and nurse investigators use WorldCare Suite to access ACDC and VPDC case reports. They use WorldCare Suite to view and print STD lab results. Also, workflow is in WorldCare Suite, but needs to be expanded for CHS and PHI for each program. This will be defined as each program is onboarded under Exhibit B (Statement of Work)	BC	Task 7 Dashboards for Upgraded System Task 21 Reports for Upgraded System Task 26 UDFs for Upgraded System
215	CHS PHN	Data Related Specifications: IRIS shall capture and report both Initial TB Category and Confirmed TB Category for TB investigations and provide an audit history of the changes to these fields.	Not a Gap	Audit history already exists in WorldCare Suite. Atlas will work with programs to gather specs under Exhibit B (Statement of Work).	BC	Task 21 Reports for Upgraded System
216	CHS PHN	Data Related Specifications: IRIS shall capture and report both Initial Diagnosis and Confirmed Diagnosis on the same view.	Gap	In WorldCare Suite, but not on same view. More details may be needed related to "same view".	TBD	TBD
217	CHS PHN	Data Related Specifications: IRIS shall allow the user with Supervisor security role to return the investigation when the investigation status is "New PHN/PHI (assigned)" to allow the investigation to be reassigned when PHN is out.	Not a Gap	In WorldCare Suite, but need to configure to meet CHS and PHI needs under Exhibit B (Statement of Work).	BC/PB	Product Baseline (Workflow)

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ITEM#	PROGRAM	REQUIREMENTS	GAP	* PROPOSED SOLUTION	** REQUIREMENTS TRACEABILITY MATRIX:	SOW REQUIREMENT TYPE:
218	CHS PHN/PHI	Special Project: IRIS shall make available to the CHS PHN/PHI the EHR Gateway routing system for the capture of ORCHID information into IRIS.	Not a Gap	ATLAS EHR Gateway	PB	Task 25 Electronic Health Record Gateway Application
219	CHS PHN/PHI	Data Related Specifications: IRIS shall allow the user with AMD security role within a specific MegaSPA to sign for and cover for AMD in other MegaSPA.	Not a Gap	Some ability in WorldCare Suite, but will need to be enhanced to meet the needs for MegaSPA under Exhibit B (Statement of Work). E-signature will be used to accomplish some requirements.	BMI	Task 9 Other Baseline Modifications for Upgraded System
220	CHS PHN/PHI	Special Project: IRIS shall enable functionality that will capture user's (e.g. physician and/or designee) electronic signature on forms, letters, email correspondence for legal documents requiring AMD, ANM, PHNS, PHN, SPHI and PHI signatures when initiating certain disease and outbreaks investigation.	Gap	Users will configure their eSignature by uploading an image of their signature script to their WorldCare account. The user will then reuse the eSignature image to sign "forms". The user can create an image of their signature script by physically signing a paper and scanning it; or by creating an image of their signature script on a tablet (such as a MS Surface device or iPad) using an appropriate program such as MS Paint or equivalent.	BMI	Task 9 Other Baseline Modifications

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ITEM#	PROGRAM	REQUIREMENTS	GAP	* PROPOSED SOLUTION	** REQUIREMENTS TRACEABILITY MATRIX:	SOW REQUIREMENT TYPE:
221	CHS PHN/PHI	Special Project: IRIS shall have the ability to generate the user schedule/itinerary and produce a map of the appointment locations is needed. Reports: Dashboard/SSRS: IRIS shall be able to generate all reports that currently exists in CMAP legacy system as the program report functionality is very valuable to the program.	Gap	Need more details related to generating users' schedule and itinerary.	TBD	TBD
222	CHS PHN/PHI	IRIS shall capture and generate reports for community outreach events, including but not limited to door to door outreach, health fair, homeless outreach and outbreak education. IRIS system shall capture and generate performance measures reports including but not limited to by Programs and Diseases. IRIS shall support and enforce requirements related to PHN providing documentations related to the investigation including attachments.	Gap	Dashboards and SSRS Report	BMI	Task 7 Dashboards for Upgraded System Task 21 Reports for Upgraded System
223	CHS PHN	IRIS shall support the pre-population of demographic information on forms and letters. IRIS shall support the linking of the index case to the contacts and outbreak locations. The CHS PHN should be able to see all contacts and locations linked to the index case without navigation out of the index case.	Gap	In WorldCare Suite. Attachments can be added to the Electronic Filing Cabinet (EFC).	TBD	TBD
224	CHS PHN/PHI	IRIS shall support the pre-population of demographic information on forms and letters. IRIS shall support the linking of the index case to the contacts and outbreak locations. The CHS PHN should be able to see all contacts and locations linked to the index case without navigation out of the index case.	Not a Gap	In WorldCare Suite	PB	Product Baseline
225	CHS PHN/PHI	IRIS shall support receiving of update alerts for name and address update via the ELR message so that duplicate investigations are not created.	Not a Gap	In WorldCare Suite	PB	Product Baseline
226	CHS PHN/PHI	IRIS shall support receiving of update alerts for name and address update via the ELR message so that duplicate investigations are not created.	Not a Gap	In WorldCare Suite	PB	Product Baseline

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ITEM#	PROGRAM	REQUIREMENTS	GAP	* PROPOSED SOLUTION	** REQUIREMENTS TRACEABILITY MATRIX:	SOW REQUIREMENT TYPE:
227	CHS PHN/PHI	IRIS shall support the printing of the investigation if necessary by the PHN or PHI to take out on the field.	Not a Gap	In WorldCare Suite	PB	Product Baseline
228	CHS	IRIS shall support "offline data capture" using laptop device that enable CHS nurse to use the check-in/check-out feature when there is no internet connectivity on the same laptop that is used to access IRIS. After uploading the data that was collected offline, the data should be removed from the laptop device.	Gap	Atlas will verify with their development team on the fit of the proposed solution with LAC requirements under and in accordance with Exhibit B (Statement of Work).	BM	Task 9 Other Baseline Modifications for Upgraded System
229	ACDC	When a new Outbreak is opened, if the Location where the Outbreak occurred is not already in IRIS a new Location must be created. Once the new Location is created and saved, the District and Census tract shall automatically be assigned and the fields are auto-populated based on the geocoded address of the selected location.	Gap	Configuration for WorldCare Suite version 17 under Exhibit B (Statement of Work).	BM	Task 9 Other Baseline Modifications for Upgraded System
230	DHSP	A method for doctors to submit a request for lab results over the Internet and have that request auto populate IRIS as well as send that request to the Public Health Lab.	Not a Gap	Atlas Physician Portal	PB	Task 24 Physician Portal Application
231	ACDC	IRIS ACDC New Syndromic Surveillance Connections	Gap	Syndromic Surveillance Connections	BID	Task 8 Specified Baseline Interfaces for Upgraded System
232	ACDC	Reports: SSRS (non-dashboard) IRIS shall create periodic high-level mapping of aggregate data reports in response to a new disease outbreak or emerging disease.	Gap	Dashboards and SSRS Report	BM	Task 21 Reports for Upgraded System

**ATTACHMENT D.1
SYSTEM REQUIREMENTS FOR UPGRADED SYSTEM**

ITEM#	PROGRAM	REQUIREMENTS	GAP	* PROPOSED SOLUTION	** REQUIREMENTS TRACEABILITY MATRIX:	SOW REQUIREMENT TYPE:
234	VPH	<p>IRIS shall create VPH specific User Defined Forms (UDFs) with pre-defined fields and business rules that will facilitate Animal Bite surveillance and case management workflows and shall incorporate the following UDF/Tab into IRIS to support data reporting of animal bite and disease:</p> <ul style="list-style-type: none"> - Animal Bite Surveillance UDF/Tab - Animal Disease Surveillance UDF/Tab <p>IRIS shall develop and configure the aforementioned UDFs and have them available in the Community Reporting Module to allow UDFs to be attached and viewed by Veterinary user(s) for case investigation, surveillance and case management.</p>	Gap	Will require development of UDFs and configuration of UDFs in the Community Reporting Module, all under Exhibit B (Statement of Work).	BC	Task 26 UDFs for Upgraded System
235	TBCP	<p>IRIS Shall create TBCP specific UDF with pre-defined fields and business rules that will support the TB surveillance and data reporting of the TBCP Liaison Nurse and shall incorporate TBCP Liaison Nurse Worksheet form UDF made available from the electronic filing cabinet.</p>	Gap	Will require development of UDFs and configuration of UDFs in the electronic filing cabinet, all under Exhibit B (Statement of Work).	BC	Task 26 UDFs for Upgraded System
236	DHSP	<p>IRIS shall create DHSP specific User Defined Forms with pre-defined fields and business rules that will support the DHSP surveillance and data reporting of diseases Syphilis Infection, the system shall include the following Form/Tab:</p> <ul style="list-style-type: none"> - Syphilis Infection Clinical Form /Tab - Syphilis Infection Laboratory Form/Tab - Syphilis Infection Health Dept. Follow-up - Syphilis Infection STD Contacts - Syphilis Patient Interview form (in electronic filing cabinet) - CGSS Patient Interview (in filing cabinet) 	Gap	Will require development of UDFs and configuration of UDFs in the tabs and electronic filing cabinet, all under Exhibit B (Statement of Work).	BC	Task 26 UDFs for Upgraded System

**ATTACHMENT D.1
SYSTEM REQUIREMENTS FOR UPGRADED SYSTEM**

ITEM#	PROGRAM	REQUIREMENTS	GAP	* PROPOSED SOLUTION	** REQUIREMENTS TRACEABILITY MATRIX:	SOW REQUIREMENT TYPE:
237	DHSP	<p>IRIS shall create DHSP specific User Defined Forms with pre-defined fields and business rules that will support the DHSP surveillance and data reporting of diseases Gonococcal Infection, the system shall include the following Form/Tab:</p> <ul style="list-style-type: none"> - Gonococcal Infection Clinical Form /Tab - Gonococcal Infection Laboratory Form/Tab - Gonococcal Infection Health Dept. Follow-up - Gonococcal Infection STD Contacts 	Gap	<p>Will require development of UDFs and configuration of UDFs in the tabs and electronic filing cabinet, all under Exhibit B (Statement of Work).</p>	BC	Task 26 UDFs for Upgraded System
238	DHSP	<p>IRIS shall create DHSP specific User Defined Forms with pre-defined fields and business rules that will support the DHSP surveillance and data reporting of diseases Chlamydial Infection, the system shall include the following Form/Tab:</p> <ul style="list-style-type: none"> - Chlamydial Infection Clinical Form /Tab - Chlamydial Infection Laboratory Form/Tab - Chlamydial Infection Health Dept. Follow-up - Chlamydial Infection STD Contacts 	Gap	<p>Will require development of UDFs and configuration of UDFs in the tabs and electronic filing cabinet, all under Exhibit B (Statement of Work).</p>	BC	Task 26 UDFs for Upgraded System
239	TBCP	<p>IRIS shall configure the fields and sections of the baseline features of the CDPH "Clinical Info" UDF/Tab for disease type Tuberculosis. The baseline configuration of existing Clinical Info UDF/Tab will enable TBCP to fully capture the information needed for the mandated reporting requirements. Changes to the following sections and fields includes without limitation to:</p> <p>Status section modification needed:</p> <ul style="list-style-type: none"> - Single status for TB - most likely checkboxes for ATS classification (for example, there's no option for TB4) 	Gap	<p>Will require modifications to the Clinical Info. Tab sections and fields, all under Exhibit B (Statement of Work).</p>	BC	Task 26 UDFs for Upgraded System

**ATTACHMENT D.1
SYSTEM REQUIREMENTS FOR UPGRADED SYSTEM**

ITEM#	PROGRAM	REQUIREMENTS	GAP	* PROPOSED SOLUTION	** REQUIREMENTS TRACEABILITY MATRIX:	SOW REQUIREMENT TYPE:
		<ul style="list-style-type: none"> - TB 3 or 5 would need designation of pulmonary, extra pulmonary, or both as well as the ability to add anatomical sites. - Anatomical sites selections need to be in alignment with the RVCT - Anatomical site entry cannot be free-text field. <p>Skin Test and IGRA section modification needed:</p> <ul style="list-style-type: none"> - Need separate section for TST and IGRA - Need field "Date Reported" - Need field "Type of IGRA" - Dropdown menu for IGRA result must contain "borderline" option - Modify functionality so that the user can add additional TST and IRGA sections - Remove Chest x-ray from this section, since it is redundant with the next section below - Create fields/section that captures prior history of TST/IGRA testing. <p>Chest Imaging section modification needed:</p> <ul style="list-style-type: none"> - Result value set will be amended. Need to include "Military" selection. - Need comparison field for multiple CXRs: if CXR improvement, then could be reason for TB clinical case diagnosis <p>Other Imaging section modification needed:</p> <ul style="list-style-type: none"> - Need new section to capture other imaging studies not of the chest that may be conducted for diagnosis. Bacteriology, NAA/PCR Tests section modification: 				

ATTACHMENT D.1
SYSTEM REQUIREMENTS FOR UPGRADED SYSTEM

ITEM#	PROGRAM	REQUIREMENTS	GAP	* PROPOSED SOLUTION	** REQUIREMENTS TRACEABILITY MATRIX:	SOW REQUIREMENT TYPE:
		<ul style="list-style-type: none"> - Need to add field "Date Reported" - Field "Smear Result", add selection value "Doubtful" - Field "Source" should not be free-text - Field "NAA/PCR Result", add selection values "Detected" and "Not Detected" - Field "Culture Result" add selection value "Overgrown" - Add field "Smear Grade" - Need the ability to assign an identification number for tests done on the same specimen when different labs assign different accession numbers <p>TB Treatment Information section modifications:</p> <ul style="list-style-type: none"> - Require wholesale reworking - Need section for "Initial Regimen" where there are checkboxes for drugs part of the initial regimen and accompanying date of initiation. - Eliminate individual drug dates - Drugs should not be entered as free-text fields - Treatment information to include a repeating section to capture any changes to treatment - Need section for "Outcome of Treatment" - Need section for "Directly Observed Therapy" - Date entry logic for some of the categories do not prevent inconsistencies: e.g. can check both "unable to contact patient" and "refused treatment" at the same time. <p>Drug Resistance section modification needed:</p>				

**ATTACHMENT D.1
SYSTEM REQUIREMENTS FOR UPGRADED SYSTEM**

ITEM#	PROGRAM	REQUIREMENTS	GAP	* PROPOSED SOLUTION	** REQUIREMENTS TRACEABILITY MATRIX:	SOW REQUIREMENT TYPE:
		<ul style="list-style-type: none"> - Need replication of the RVCT follow up 1, which shows the initial - Need addition of the RVCT follow up 2 which shows the final, if applicable - Need dates of drug resistance reported <p>Primary Provider Contact information section modification needed:</p> <ul style="list-style-type: none"> - Section needs to provide a way to manage continuity of care between multiple providers. - Field needs to specify this as "Primary TB Provider Contact Information (if PMD)" - Section needs to allow the user add multiple Primary TB Provider Contact Information" to track if the patient moves between multiple providers - Need field that identifies "District of Assignment" - Need field that identifies "DPHN Case Manager" - Need fields to capture private provider information if private provider patient <p>Other Provider Contact Information section modification needed:</p> <ul style="list-style-type: none"> - Can include information on primary care physician 				

**ATTACHMENT D.1
SYSTEM REQUIREMENTS FOR UPGRADED SYSTEM**

ITEM#	PROGRAM	REQUIREMENTS	GAP	* PROPOSED SOLUTION	** REQUIREMENTS TRACEABILITY MATRIX:	SOW REQUIREMENT TYPE:
240	TBCP	<p>IRIS shall configure the fields and sections of the baseline features of the CDPH "Epidemiologic Info." UDF/Tab for disease type Tuberculosis. The baseline configuration of existing Epidemiologic Info UDF/Tab will enable TBCP to fully capture the information needed for the mandated reporting requirements. Changes to the following sections and fields includes without limitation to:</p> <p>Index Case / Suspect Information section modification needed:</p> <ul style="list-style-type: none"> - Need to remove the interview fields and replace section as a repeating section to capture multiple interviews without limits. - Need to capture information on whether the patient is symptomatic - Need field to capture "Smear Grade" information - Need field to capture "CXR result" information - Need field to capture "Culture result" information - Need field to capture "NAAT result" information <p>Time Spent During Infection Period section modifications:</p> <ul style="list-style-type: none"> - Need to differentiate down to the to the setting level to assure CI - Relocate field "Date the infectious case first spent time in the location" display before the field "Date the infectious case last spent time in the location" <p>Contact (system) section modifications needed:</p>	Gap	Will require modifications to the Epidemiologic Info. Tab sections and fields, all under Exhibit B (Statement of Work).	BC	Task 26 UDFs for Upgraded System

**ATTACHMENT D.1
SYSTEM REQUIREMENTS FOR UPGRADED SYSTEM**

ITEM#	PROGRAM	REQUIREMENTS	GAP	* PROPOSED SOLUTION	** REQUIREMENTS TRACEABILITY MATRIX:	SOW REQUIREMENT TYPE:
		<ul style="list-style-type: none"> - Contacts need to associate with setting and not one master list of all, in order to be able to assess infection rates per setting. - Field "Type of Contact" should have only one selection value "Other". - Field "Type of Contact" option/selection values needs to be updated. - Field "Priority" need to include selection value "Medium" - Field "Date of Contact" should be renamed to "Exposure Period" - Field "Medication used" should not be a free-text field - Need field Exposure Period information for each contact since that period will be different from the index's exposure period - Status needs to include TB values <p>Add new section "Report of Home Situation" - (fields TBD) at the top of the Epidemiological Info tab UDF to facilitate the health facility discharge process</p> <p>Add new section "Household Contact Investigation" - (fields TBD) which could be associated with a Report of Home Situation.</p>				

**ATTACHMENT D.1
SYSTEM REQUIREMENTS FOR UPGRADED SYSTEM**

ITEM#	PROGRAM	REQUIREMENTS	GAP	* PROPOSED SOLUTION	** REQUIREMENTS TRACEABILITY MATRIX:	SOW REQUIREMENT TYPE:
241	ACDC	<p>IRIS shall configure baseline ACDC CDPH UDFs for diseases under the category of Vector-borne. The baseline configuration of existing ACDC UDFs will enable ACD to fully capture the information needed for the mandated reporting requirements. The following diseases under the Vector-borne category includes without limitation to:</p> <ul style="list-style-type: none"> i. Acute Flaccid Myelitis: Patient Case Summary Form CDPH-CDC-OMB No. 0920-0009 ii. Chikungunya Case Report CDPH 8618 iii. West Nile Virus Infection Case Report CDPH 8687 iv. ACDC West Nile Virus – Positive Blood Donor to CDPH Report and Guidelines v. Dengue Case Report CDPH 8670 vi. Lyme Disease Case Report CDPH 8470 vii. Malaria Case Report CDPH 8657 viii. Meningococcal Disease Case Report CDPH 8469 ix. Meningococcal Case Summary Form ACDC x. Typhus and Other Non-Spotted Fever Rickettsioses Case Report xi. Ehrlichiosis/Anaplasmosis Case Report CDPH 8573 xii. Babesiosis Case Report CDPH 8270 xiii. Ehrlichiosis/Anaplasmosis Case Report CDPH 8573 xiv. Hantavirus Infection Case Report CDPH 9077 xv. Leptospirosis Case Report CDPH 8577 xvi. Plague (Human) Case Report CDPH 8549 xvii. Relapsing Fever Case Report CDPH 8561 xviii. Spotted Fever Rickettsioses Case Report CDPH 8561 xix. Yellow Fever Case Report CDPH 8584 xx. Zika Case Report 	Not a Gap	Functionality and UDFs exists in WorldCare Suite. Need to be configured under Exhibit B (Statement of Work).	BC	Task 26 UDFs for Upgraded System

**ATTACHMENT D.1
SYSTEM REQUIREMENTS FOR UPGRADED SYSTEM**

ITEM#	PROGRAM	REQUIREMENTS	GAP	* PROPOSED SOLUTION	** REQUIREMENTS TRACEABILITY MATRIX:	SOW REQUIREMENT TYPE:
242	ACDC	<p>IRIS shall configure baseline ACDC CDPH UDFs for diseases under the category of Foodborne. The baseline configuration of existing ACDC UDFs will enable ACD to fully capture the information needed for the mandated reporting requirements. The following diseases under the Foodborne category includes without limitation to:</p> <ul style="list-style-type: none"> i. E. coli 0157, Other STEC, Shiga Toxin Positive Feces, and/ or HUS Case Report CDPH 8555 (CDPH will change form in early 2018) ii. *Yersinosis (Marifi would like to see what CalREDIE has. May use theirs) iii. *Brucellosis iv. *Salmonellosis Epi Form and Contact Roster v. Listeriosis CDPH 8296 vi. Listeriosis UDFs in IRIS currently vii. Vibrio CDPH 8587 viii. CA_oystersupplemental_V4_fillable ix. CDC COVIS_Sections_2017_Fillable 	Gap	<p>Functionality and UDFs exists in WorldCare Suite. Need to be configured under Exhibit B (Statement of Work).</p>	BC	Task 26 UDFs for Upgraded System
243	ACDC	<p>IRIS shall configure baseline ACDC CDPH UDFs for diseases under the category of Outbreaks. The baseline configuration of existing ACDC UDFs will enable ACD to fully capture the information needed for the mandated reporting requirements. The following diseases under the Outbreaks category includes without limitation to:</p> <ul style="list-style-type: none"> i. Smallpox Evaluation Worksheet ii. Smallpox Post-Event Surveillance Instructions iii. *Ebola Virus Disease Viral Hemorrhagic Fevers (Ebola) 	Gap	<p>Functionality and UDFs exists in WorldCare Suite. Need to be configured under Exhibit B (Statement of Work).</p>	BC	Task 26 UDFs for Upgraded System

**ATTACHMENT D.1
SYSTEM REQUIREMENTS FOR UPGRADED SYSTEM**

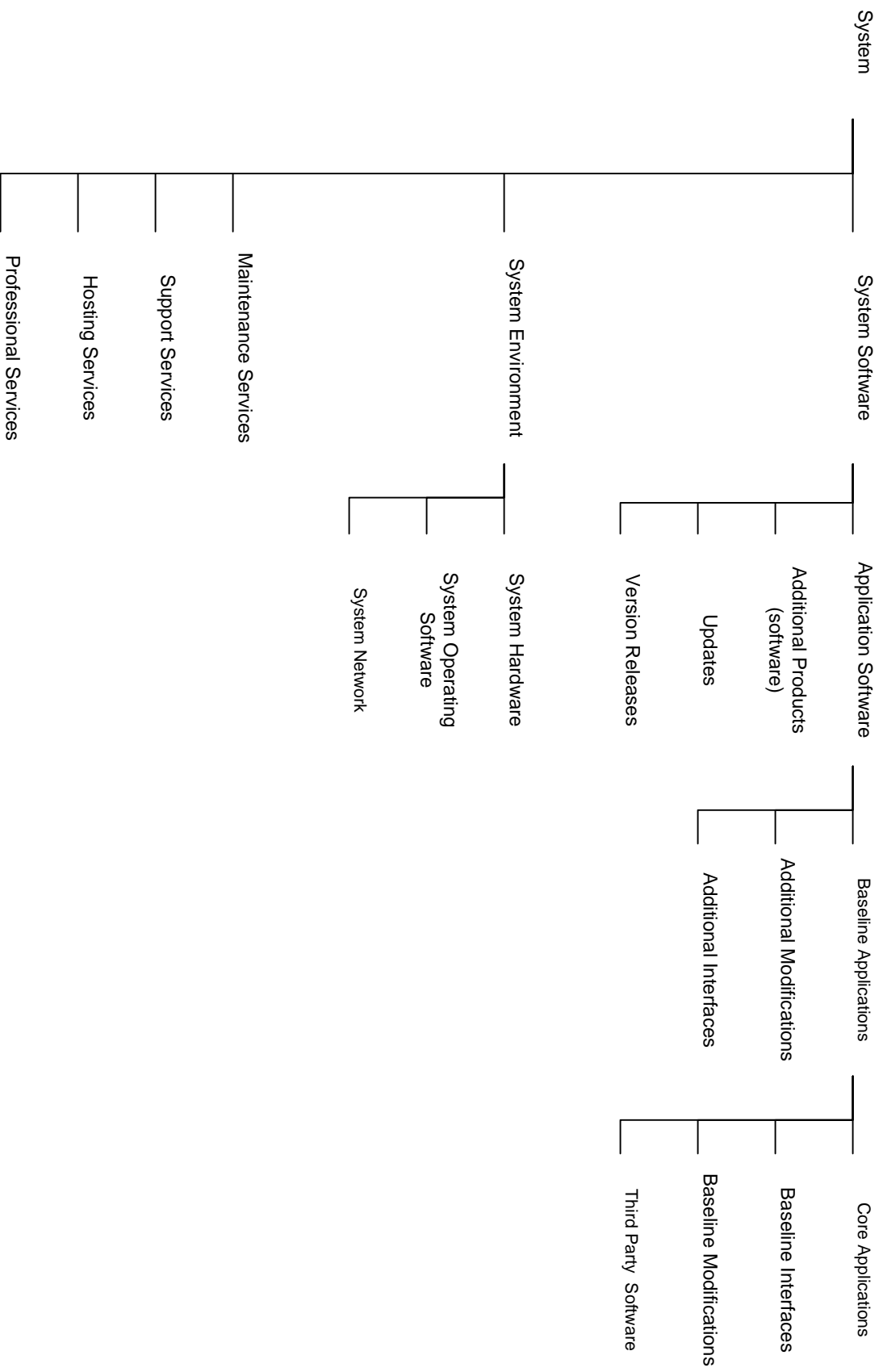
ITEM#	PROGRAM	REQUIREMENTS	GAP	* PROPOSED SOLUTION	** REQUIREMENTS TRACEABILITY MATRIX:	SOW REQUIREMENT TYPE:
		iv. Outbreaks (acute care health facility) v. Atypical Scabies – Community CDPH 8554 vi. *Atypical Scabies Outbreak – Healthcare Facility/Hospital vii. Anthrax Human Case Report CDPH 8578 viii. Botulism Case Report CDPH 8547				
244	ACDC	IRIS shall configure baseline ACDC CDPH UDFs for diseases under the category of Hepatitis, Arbovirus and Influenza. The baseline configuration of existing ACDC UDFs will enable ACD to fully capture the information needed for the mandated reporting requirements. The following diseases under the Hepatitis, Arbovirus and Influenza category includes without limitation to: i. Non-SNF CRE ii. *Viral Hep A Case Report iii. *Viral Hep B or C Case Report iv. Hep E CDPH 8701 (revised 02/17)	Gap	Functionality and UDFs exists in WorldCare Suite. Need to be configured under Exhibit B (Statement of Work).	BC	Task 26 UDFs for Upgraded System

**ATTACHMENT D.1
SYSTEM REQUIREMENTS FOR UPGRADED SYSTEM**

ITEM#	PROGRAM	REQUIREMENTS	GAP	* PROPOSED SOLUTION	** REQUIREMENTS TRACEABILITY MATRIX:	SOW REQUIREMENT TYPE:
245	ACDC	IRIS shall configure baseline ACDC CDPH UDFs for diseases under the category of Hospital Outreach Unit (HOU). The baseline configuration of existing ACDC UDFs will enable ACD to fully capture the information needed for the mandated reporting requirements. The following diseases under the Hospital Outreach Unit (HOU) category includes without limitation to: xxi. *Cocci Form xxii. Legionella Case Report CDPH 8588 xxiii. Hospital-Acquired Infection Outbreak – Acute Care xxiv. Hospital-Acquired Infection Outbreak – Sub-Acute Facility xxv. Hospital-Acquired Infection Outbreak – Outpatient Healthcare Setting	Gap	Functionality and UDFs exists in WorldCare Suite. Need to be configured under Exhibit B (Statement of Work).	BC	Task 26 UDFs for Upgraded System
246	ACDC	IRIS shall configure baseline ACDC CDPH UDFs for diseases under the category of Policy. The baseline configuration of existing ACDC UDFs will enable ACD to fully capture the information needed for the mandated reporting requirements. The following diseases under the Policy includes without limitation to: i. Tularemia Case Report CDPH 8559 ii. Q-Fever Case Report CDPH 8548	Gap	Functionality and UDFs exists in WorldCare Suite. Need to be configured under Exhibit B (Statement of Work).	BC	Task 26 UDFs for Upgraded System

ATTACHMENT D.2

System Definitions



ATTACHMENT D.3

List of Reports

System Requirements and Specifications for Baseline Modifications constituting reports will be gathered and documented pursuant to Task 21 (Reports for Upgraded System) of Exhibit B (Statement of Work). For the avoidance of doubt, once delivered under the Statement of Work, Baseline Modifications constituting reports are available for use by all Users.

1.0 DEPARTMENT OF PUBLIC HEALTH (DPH) PROGRAMS – LIST OF SQL SERVER REPORTING SERVICE (SSRS) REPORTS

1.1 *Acute Communicable Disease Control Program (ACDC)*

- Quarterly report using vCMR data for ACDC Diseases and Outbreaks
- Annual report using vCMR data
- Weekly Outbreak Log/Public Health Investigations
- Combined-CDCP Programs Monthly Automated Communicable Disease Reports
- Combined Disease Report for ACDC Director

1.2 *Division of HIV and STD Programs (DHSP)*

- Workflow Performance Summary
- High-morbidity Providers
- Quality Control Report
- Partner Services Quarterly Report
- HIV Partner Services Report

1.3 *Community Health Services (CHS)*

- List of cases pending referrals
- Overdue cases (cases not opened by staff in 24 hours)

1.4 *Public Health Investigation (PHI) Administration*

- Case Assignment Summary Reports -- listed by disease (tuberculosis, communicable diseases, Syphilis, HIV, Gonorrhea, Chlamydia)
 - Total Number of open cases
 - Total Number of assigned cases to date
 - Total Number of cases assigned per a month
 - Total Number of cases closed per a month
 - Total Number of cases opened 15 -30 days

1.5 Tuberculosis (TB) Control Program – (5 from the following)

- TB Surveillance Nursing Dashboard
- TB Liaison Nursing Dashboard
- Report of Verified Case of Tuberculosis (RVCT) Quality Assurance Review Dashboard
- Health Officer’s Log Report Dashboard
- Provider Portal Dashboard
- Cohort Review Dashboard
- Legal Intervention Dashboard
- Laboratory Error Investigation Dashboard
- B-Notification Dashboard
- Targeted Testing Dashboard
- Incentive & Enabler Dashboard

1.6 Vaccine Preventable Disease Control (VPDC) Program – Perinatal Hepatitis B

- Case Managers Reports
- Supervisor Summary report
- Supervisor Infant Report (weekly)
- Perinatal Hepatitis B Workload and Morbidity Report
- ACDC Annual Report

1.7 Vaccine Preventable Disease Control Program – Epidemiology

- Specimen Management Tracking Report
- Facility Line List of Cases
- Case and High Suspect Line List
- Report Quality Assurance Spreadsheets
- IRIS Auto-population of VPDC Case Report Forms

1.8 Veterinary Public Health (VPH) Program

- 5 VPH SSRS Reports (TBD)

ATTACHMENT D.4

List of Dashboards

System Requirements and Specifications for Baseline Modifications constituting dashboards will be gathered and documented pursuant to Task 7 (Dashboards for Upgraded System) of Exhibit B (Statement of Work). For the avoidance of doubt, once delivered under the Statement of Work, Baseline Modifications constituting dashboards are available for use by all Users.

1.0 DEPARTMENT OF PUBLIC HEALTH (DPH) PROGRAMS – LIST OF DASHBOARDS

1.1 *Acute Communicable Disease Control Program*

- Outbreak Volume by Disease Group Report
- Threshold Analysis for Disease with Increased Incidents this Week

1.2 *Division of HIV and STD Programs*

- Caseload summary (with different results based on user group)

1.3 *Community Health Services, Public Health Investigation Administration*

- Case Status
- Tuberculosis Contact investigation
- Performance Measures
- Case by Program

1.4 *Vaccine Preventable Disease Control (VPDC) Program – Epidemiology*

- VPDC Pertussis Morbidity Report
- VPDC Non-Pertussis Morbidity Report

1.5 *Vaccine Preventable Disease Control Program – Perinatal Hepatitis B*

- HBsAg Lab Reports/Confirmed Lab/Unknown Pregnancy Status

1.6 *Tuberculosis (TB) Control Program*

- TB Contact Investigation Dashboard (Priority)
- Genotype Cluster Investigation Dashboard (Priority)

ATTACHMENT D.5

Baseline Interface Requirements

Additional System Requirements and Specifications for Baseline Interfaces will be gathered and documented pursuant to Task 8 (Specified Baseline Interfaces for Upgraded System) of Exhibit B (Statement of Work).

1.0 BASELINE INTERFACES FOR UPGRADED SYSTEM

1.1 *IRIS16 - RightFax Integration*

RightFax is a centralized fax server solution that will allow faxes to be sent and received from users' desktops. This task consists of configuring IRIS to work with RightFax to enable direct faxing of letters from the System.

Proposed Solution Summary:

1. Provide an integration with RightFax that will allow Users to directly fax letters from the Letter Repository, images from an Image Album, and files in PDF format stored in an Image Album.

While User Defined (UD) Tabs, Case Reports, Lab/Electronic Health Record/Web Reports, Word/Excel documents, and the Print All output are excluded, note that these items can be printed as PDFs, saved in an Album, and then faxed.

2. In the Print Preview for the Letter/Image/PDF, and/or for each applicable file type in the Album Viewer, add a Fax icon. County may rename the Print buttons (generating the Print Preview) to "Print/Fax".

3. Pressing the Fax icon opens a dialog with the Fax number for the Report Source pre-populated. The User may change the telephone number.

4. The Fax action will be audited within Surveillance.

1.2 *Syndromic Surveillance – Three New Hospital Connections*

The Syndromic Surveillance project is an early event detection system developed by the Acute Communicable Disease Control Program utilizing chief complaint data from emergency departments. This project was developed to aid in detection of emerging infectious disease and potential bioterrorism events. Funding is requested to add an additional 25 emergency departments to expand to include all emergency departments in Los Angeles County. Under Exhibit B (Statement of Work), Contractor will be responsible for the three initial connections to the emergency departments as well as Maintenance Services with respect to these connections. In addition, the data will be stored in Contractor servers. Any further connections County desires to implement will require a Change Order or Amendment in accordance with the Agreement.

ATTACHMENT D.6

List of Other Baseline Modifications for Upgraded System

Additional System Requirements and Specifications for the Baseline Modifications identified below will be gathered and documented pursuant to Task 9 (Other Baseline Modifications for Upgraded System) of Exhibit B (Statement of Work).

1.0 OTHER BASELINE MODIFICATIONS FOR UPGRADED SYSTEM

1.1 *Electronic Filing Cabinet File Locking Functionality*

- Data for restriction may include without limitation Public Health Investigation (PHI) legal orders and those documents related to under age children, which can only be seen by certain Division of HIV and STD Program Users.
- IRIS shall enable restriction of access for certain data information within the patient's chart and allow only specific User groups the ability to access/view information. Information requiring restriction include without limitation:
 1. Performance Measures
 2. Booking number (any relevant custody data information)
 3. Mental Health
 4. Substance Abuse
 5. Social Services (for Perinatal Hep B)
 6. H-455 User Defined Form

1.2 *Mobile Accessibility of IRIS System*

- Use Case: The nurses will have the tablets in the field, connected to their County-issued iPhones for a mobile hotspot when needed. When staff are in the field, access to the IRIS system may be necessary to both acquire case information and enter collected data. For this purpose, the IRIS system will be configured for mobile accessibility through the use of internet-connected field devices, such as tablets and notebooks. However, in the event of poor internet connectivity, Atlas will develop a solution to enable field work to continue within the IRIS system despite the possible lack of internet connectivity.
- Proposed Solution: Create mobile application for capturing data in mobile device and upload information into appropriate section(s) within IRIS system using Import Web API workflow.

1.3 *CMR15 Outbreak Module - Additional Functionality: Location and District*

- District and Census Tract information are not displayed in the current Outbreak Grid. When a new Outbreak is opened, if the Location of the Outbreak is not already in the System, a new location will need to be created. Once the new Location is created and saved, the District and Census Tract will need to automatically be assigned so all fields auto-populate on the Location grid.
- Use Case: A public health investigator is notified of a suspected outbreak associated with a facility (e.g. a nursing home). The User creates an Outbreak record and selects

the facility from (or enters the facility into) the Location Dictionary. The user verifies that the correct facility address is included in the Location Dictionary entry and the address is geocoded to a census tract and census block associated with a valid Los Angeles County District. Upon population of the Location field on the Outbreak record, the District field is auto-populated with the same District present in the Location dictionary for the facility's address.

- Proposed Solution:
 1. Add a configuration to enable the Auto-assignment of District/Jurisdiction for Outbreaks. Perhaps "OutbreakAutoJurisdictionOn" or "OutbreakAutoJurisdictionAssignment".
 2. Use the existing configuration to enable a District/Jurisdiction change alert in an Outbreak if a District/Jurisdiction has already been populated/saved (as per the DI/CI workflow).
 3. When a Location is selected for an Outbreak, auto-populate the Jurisdiction saved for the Location to the Jurisdiction field of the Outbreak, if it is blank. If it is not blank, employ logic as per point 2 above.
 - Ensure that if the Auto-Assignment is enabled, that the Auto-Assignment is executed when Outbreaks are created via:
 - Import Utility (if a Location is provided)
 - Group Event conversion (if a Location is provided).
 - Auto-Creation Rules.

1.4 IRIS Integration with Web Services (WS) Federation

- Increase log-in security by utilization of WS-Federation for the Active Directory Federation Services (ADFS) connection
- Proposed Solution:
 1. System user clicks on shortcut on desktop or goes to URL: <https://IRIS.ph.lacounty.gov>.
 - System redirects user to authenticate with the County's ADFS servers. User must use their County Active Directory (AD) account (e.g., username@ph.lacounty.gov for employees and C123456@ph.lacounty.gov for contractors) and password.
 2. County's ADFS servers then prompt the user for Multi-factor Authentication (MFA).
 - User must answer a challenge question from the County's MFA (user can select to remember device and the MFA prompt will not come up in future logins).
 - Once MFA check is complete ADFS redirects user to System application.
 3. User now has access to the application.

1.5 Electronic Signature

- Will be used for signing of Legal Orders, Health Officer Orders, and by Area Health Officer (AHO) when initiating certain disease and outbreaks investigation. Proposed Solution: Users will configure their eSignature by uploading an image of their signature script to their System account. The User will then reuse the eSignature image to sign

"forms". The User can create an image of their signature script by physically signing a paper and scanning it; or by creating an image of their signature script on a tablet (such as a MS Surface device or iPad) using an appropriate program such as Microsoft Paint or equivalent.

ATTACHMENT D.7

Design Specifications for the CalREDIE Interface

System Requirements and Specifications to be finalized as described in Section 5 (Agreement Regarding the Interface with the State of California's CalREDIE System) of Amendment Number 11, dated as of _____, 2018, to County Contract No. PH-001629. For the avoidance of doubt, once delivered under the Statement of Work, the Interface with the State's CalREDIE system is available for use by all Users.

1.0 CalREDIE Interface System Requirements

1.1 *Acute Communicable Disease Control Program (ACDC)*

- Continue to send core data variables (demographics), lab info (name, specimen collection date, and specimen type) and risk factor variables for closed confirmed cases. ACDC is currently sending several vCMR data fields to California Department of Public Health's (CDPH) Statistical Branch electronically (aka Weekly Place Report) and on a weekly basis. However, risk factor, or epi data (from the Case Management and Processing (CMap) System), are printed out and sent manually. All are performed by the ACDC-Morbidity Unit.

1.2 *Division of HIV and STD Programs (DHSP)*

- See Attachment D.7.1, Screenshots of CalREDIE Data Fields

1.3 *Tuberculosis Control Program (TBCP)*

- For Report of Verified Case of Tuberculosis (RVCT) Reporting: Contractor must develop a process to migrate Disease Incident tab data elements and the RVCT in the Disease Incident record between IRIS and CalREDIE without intervention required by the TBCP. This migration process should occur no less than once per week, and account for all new or updated RVCT reports within IRIS.
- For transferred patients (Moved Patients): The IRIS will be able to transfer the data within a Disease Incident or Contact Investigation record between a local health jurisdiction using CalREDIE and a local health jurisdiction using IRIS. This is a bi-directional data transfer requirement. The TBCP will collaborate with Contractor and the CDPH to define the requirements for the exchange of data between CalREDIE and IRIS.
- Interjurisdictional TB Notifications: The IRIS will be able to transfer the data contained in an Interjurisdictional TB Notification record between a local health jurisdiction using CalREDIE and a local health jurisdiction using IRIS. This is a bi-directional data transfer requirement. The TBCP will collaborate with Contractor and the CDPH to define the requirements for the exchange of data between CalREDIE and IRIS.
- Interjurisdictional TB Notification Follow Ups: The IRIS will be able to transfer the data contained in an Interjurisdictional TB Notification Follow-up record between a local health jurisdiction using CalREDIE and a local health jurisdiction using IRIS. This is a bi-directional data transfer requirement.

1.4 Vaccine Preventable Disease Control (VPDC) Program – Epidemiology

All IRIS data fields in the following disease-specific CDPH Case Report forms need to be transferred to CDPH via this Interface (see Attachment D.7.1, Screenshots of CalREDIE Data Fields):

- Pertussis
- Measles
- Mumps
- Tetanus
- Diphtheria
- Haemophilus Influenzae
- Rubella
- Congenital Rubella
- Polio
- Varicella hospitalization and death

1.5 Vaccine Preventable Disease Control (VPDC) Program – Perinatal Hepatitis B

All IRIS data fields in the following CDPH forms need to be transferred to CDPH via this Interface (see Attachment D.7.1, Screenshots of CalREDIE Data Fields):

- Perinatal Hepatitis B:
 - Case Report
 - In-State Transfer
 - Out-of-State Transfer
 - Prevention Program Confidential HBsAg+ Case/Household Management Report
 - Perinatal Post-Exposure Prophylaxis (PEP) Errors

Attachment D.7.1 Screenshots of CaREDIE Data Fields

Report Name: HIV Case Report

Business Requirement: To comply with State and Federal mandated a report is required for HIV surveillance grant funding from CDC. It is mission critical to ensure that HIV-positive individuals receive appropriate treatment and preventative care that includes partner services and treatment verification.

Data Gathering Notes	Removed Field	DATA FIELDS (Required Column)	FIELD DEFINITION (Data Element)	Field Object (Values) <i>Refer to the Adult HIV/AIDS Case Form</i>
		Date of HIV Case Report	Date of HIV Case Report	
		Physician Name	Physician Name	
		Physician Phone Number	Physician Phone Number	
		Did this report initiate a new case investigation		Values are as follows: - Yes - No - Unknown
		Surveillance Method	Surveillance Method	Values are as follows: - Active - Passive - Followup - Reabstraction - Unknown - Yes - No - Unknown
Registration		Patient Last Name	Patient Last Name	
Registration		Patient Middle Name	Patient Middle Name	
Registration		Patient First Name	Patient First Name	
Registration		Patient Address Type	Patient Address Type	Values are as follows: - Residential - Homeless
Registration		Patient Street	Patient Street	
Registration		Patient City	Patient City	
		Patient County	Patient County	
Registration		Patient State	Patient State	
Registration		Patient Zip Code	Patient Zip Code	
Registration		Patient Home Phone	Patient Home Phone	xxx-xxx-xxxx is the format
Registration		Patient Cell Phone	Patient Cell Phone	xxx-xxx-xxxx is the format
Registration		Patient Social Security	Patient Social Security Number	xxx-xx-xxxx is the format
DL/Other Id Number		DL/Other Id Number	Patient Other ID Type #1	
Registration		Booking Number	Patient Other ID Type #2	
Registration -- biological gender		Gender (Sex)	Gender (Sex)	code value display
Registration		Patient Country of Birth	Patient Country of Birth	
Registration		Patient Date of Birth	Patient Date of Birth	mm/dd/yyyy
person table		Patient Vital Status:	Patient Vital Status:	Values are as follows: - 1 - Alive - 2 - Dead
person table		Patient Date of Death:	Patient Date of Death:	
Diagnosis - Mike to provide list of ICD10 Codes		ICD10 1	ICD10 1	Values are as follows: ICD10 Code
Diagnosis - Mike to provide list of ICD10 Codes		ICD10 2	ICD10 2	Values are as follows: ICD10 Code
Diagnosis - Mike to provide list of ICD10 Codes		ICD10 3	ICD10 3	Values are as follows: ICD10 Code
Diagnosis - Mike to provide list of ICD10 Codes		ICD10 4	ICD10 4	Values are as follows: ICD10 Code
Diagnosis - Mike to provide list of ICD10 Codes		ICD10 5	ICD10 5	Values are as follows: ICD10 Code
Social History - SOGI SHX Gender Identity - SHXGENDERIDENTITY		Current Gender Identity	Current Gender Identity	Current Gender:Male/Female/Transgender (M-F)/Transgender (F-M)/Unknown/Other
Registration		Ethnic Group	Ethnic Group	code value display
Registration		Race	Race	code value display
Deb to follow-up		Residence at Diagnosis: Address Type	Residence at Diagnosis: Address Type	Values are as follows: - Residence at HIV Diagnosis - Residence at AIDS Diagnosis
Deb to follow-up		Patient Address at HIV Diagnosis: House Number	Patient Address at HIV Diagnosis: House Number	

Deb to follow-up		Address of Residence at HIV Diagnosis: Street	Address of Residence at HIV Diagnosis: Street	
Deb to follow-up		Address of Residence at HIV Diagnosis: City	Address of Residence at HIV Diagnosis: City	
Deb to follow-up		Address of Residence at HIV Diagnosis: County	Address of Residence at HIV Diagnosis: County	
Deb to follow-up		Address of Residence at HIV Diagnosis: State	Address of Residence at HIV Diagnosis: State/Country	
Deb to follow-up		Address of Residence at HIV Diagnosis: Country	Address of Residence at HIV Diagnosis: Country	
Deb to follow-up		Address of Residence at HIV Diagnosis: Zip Code	Address of Residence at HIV Diagnosis: Zip Code	
Deb to follow-up		Patient Address at AIDS Diagnosis: House Number	Patient Address at AIDS Diagnosis: House Number	
Deb to follow-up		Address of Residence at AIDS Diagnosis: Street	Address of Residence at AIDS Diagnosis: Street	
Deb to follow-up		Address of Residence at AIDS Diagnosis: City	Address of Residence at AIDS Diagnosis: City	
Deb to follow-up		Address of Residence at AIDS Diagnosis: County	Address of Residence at AIDS Diagnosis: County	
Deb to follow-up		Address of Residence at AIDS Diagnosis: State	Address of Residence at AIDS Diagnosis: State	
Deb to follow-up		Address of Residence at AIDS Diagnosis: Country	Address of Residence at AIDS Diagnosis: Country	
Deb to follow-up		Address of Residence at AIDS Diagnosis: Zip Code	Address of Residence at AIDS Diagnosis: Zip Code	
Org/Facility		Facility Name	Facility Name	
Org/Facility		Facility: Phone Number	Facility: Phone Number	
Org/Facility		Facility: Street Address	Facility: Street Address	
Org/Facility		Facility: City	Facility: City	
Org/Facility -- County not captured		Facility: State/County	Facility: State/County	
Org/Facility		Facility: Zip Code	Facility: Zip Code	
Social History		Sex with a male	Sex with a male	Values are as follows: - Yes - No - Unknown
Social History		Sex with a female	Sex with a female	Values are as follows: - Yes - No - Unknown
Have you ever used injected drugs? -- HAVEYOUEVERUSEDINJECTEDDRUGS		Injected non-prescription drugs	Injected non-prescription drugs	Values are as follows: - Yes - No - Unknown
Deb to follow-up		Contact with intravenous/injection drug user (IDU)	Contact with intravenous/injection drug user (IDU)	Values are as follows: - Yes - No - Unknown
Deb to follow-up		Contact with a bisexual male	Contact with a bisexual male	Values are as follows: - Yes - No - Unknown
Deb to follow-up		Contact with a person with AIDS or documented HIV infection, risk not specified:	Contact with a person with AIDS or documented HIV infection, risk not specified:	Values are as follows: - Yes - No - Unknown
Deb to follow-up		Contact with transplant recipient with documented HIV:	Contact with transplant recipient with documented HIV:	Values are as follows: - Yes - No - Unknown
Deb to follow-up		Contact with transfusion recipient with documented HIV:	Contact with transfusion recipient with documented HIV:	Values are as follows: - Yes - No - Unknown
Deb to follow-up		Received clotting factor for hemophilia/coagulation disorder	Received clotting factor for hemophilia/coagulation disorder	Values are as follows: - Yes - No - Unknown
Have you received a blood transfusion -- HAVEYOURECEIVEDABLOODTRANSFUSION		Received transfusion of blood/blood components (non-clotting)	Received transfusion of blood/blood components (non- clotting)	Values are as follows: - Yes - No - Unknown

Were you prenatally infected? -- WEREYOUPRENATALLYINFECTED		Perinatally infected (please enter in comments and local/optional fields section)	Perinatally infected (please enter in comments and local/optional fields section)	Values are as follows: - Yes - No - Unknown
Deb/Mike to determine which field to use		Other documented risk (if yes, specify)	Other documented risk (if yes, specify)	Values are as follows: - Yes - No - Unknown
Deb/Mike to determine which field to use		Other documented risk yes, specify	Other documented risk yes, specify	
Lab Orders - use same format as STD case report		orderable name		grouping of lab orders/results repeat 5 times; Need most recent on given encounter; Mike to provide a list of orderables. Work with the Lab Team on orderable names.
Lab Orders - use same format as STD case report		site		grouping of lab orders/results repeat 5 times
Lab Orders - use same format as STD case report		specimen type		grouping of lab orders/results repeat 5 times
Lab Orders - use same format as STD case report		result		grouping of lab orders/results repeat 5 times
Lab Orders - use same format as STD case report		Specimen Collection Date		grouping of lab orders/results repeat 5 times
First CD4 (T-cell) Count -- FIRSTCD4TCELLCOUNT		First CD4 result < 200 cells/ul or < 14%: CD4 count	First CD4 result < 200 cells/ul or < 14%: CD4 count	
Deb to confirm location		Did documented laboratory test results meet approval HIV diagnostic algorithm?	Did documented laboratory test results meet approval HIV diagnostic algorithm?	Values are as follows: - Yes - No - Unknown
Deb to confirm location		If yes, provide date (specimen collection date if Known) of earliest positive test for this	If yes, provide date (specimen collection date if Known) of earliest positive test for this	
Deb to confirm location		If HIV laboratory tests were not documented, is HIV diagnosis documented by a physician	If HIV laboratory tests were not documented, is HIV diagnosis documented by a physician	Values are as follows: - Yes - No - Unknown
Deb to confirm location		If yes, provide date of documentation by physician:	If yes, provide date of documentation by physician:	
Mike to provide list - cross encounter - most recent result		Candidiasis, esophageal	Candidiasis, esophageal	ICD10
Mike to provide list - cross encounter - most recent result		Candidiasis, esophageal: Date	Candidiasis, esophageal: Date	
Mike to provide list - cross encounter - most recent result		Cryptococcosis, extrapulmonary	Cryptococcosis, extrapulmonary	ICD10
Mike to provide list - cross encounter - most recent result		Cryptococcosis, extrapulmonary: Date	Cryptococcosis, extrapulmonary: Date	
Mike to provide list - cross encounter - most recent result		Cytomegalovirus disease (other than in liver, spleen or nodes)	Cytomegalovirus disease (other than in liver, spleen or nodes)	ICD10
Mike to provide list - cross encounter - most recent result		Cytomegalovirus disease (other than in liver, spleen or nodes): Date	Cytomegalovirus disease (other than in liver, spleen or nodes): Date	
Mike to provide list - cross encounter - most recent result		Herpes simple: chronic ulcer(s) (>1 mo. duration), bronchitis, pneumonitis or esophagitis	Herpes simple: chronic ulcer(s) (>1 mo. duration), bronchitis, pneumonitis or esophagitis	ICD10
Mike to provide list - cross encounter - most recent result		Herpes simple: chronic ulcer(s) (>1 mo. duration), bronchitis, pneumonitis or esophagitis: Date	Herpes simple: chronic ulcer(s) (>1 mo. duration), bronchitis, pneumonitis or esophagitis: Date	
Mike to provide list - cross encounter - most recent result		Kaposi's sarcoma	Kaposi's sarcoma	ICD10
Mike to provide list - cross encounter - most recent result		Kaposi's sarcoma: Date	Kaposi's sarcoma: Date	
Mike to provide list - cross encounter - most recent result		Pneumocystis	Pneumocystis	ICD10
Mike to provide list - cross encounter - most recent result		Pneumocystis: Date	Pneumocystis: Date	
Mike to provide list - cross encounter - most recent result		Wasting syndrome due to HIV	Wasting syndrome due to HIV	ICD10
Mike to provide list - cross encounter - most recent result		Wasting syndrome due to HIV: Date	Wasting syndrome due to HIV: Date	
Mike to provide list - cross encounter - most recent result		What past opportunistic Infections Have you had?	What past opportunistic Infections Have you had?	
Have you been told you have AIDS -- HAVEYOUBEENTOLDYOUHAVEAIDS		Has This Patient been Informed of His/Her HIV Infection?	Has This Patient been Informed of His/Her HIV Infection?	Values are as follows: - Yes - No - Unknown

Primary Insurance Plan Name		Patient 's Medical Treatment is Primary Reimbursed by:	Patient 's Medical Treatment is Primary Reimbursed by:	Values are as follows: - 1-Medicaid -2-Private Insurance/HMO -3- No Coverage - 4-Other Public Funding - 9 - Unknown
problem list -- SNOMED CT = "Pregnant" = 191073013 (actual snomed ct code) Nomenclature_id = 7777483.00 Active status follow same logic as STD Case Report		Is This Patient Currently Pregnant?	Is This Patient Currently Pregnant?	Values are as follows: - Yes - No - Unknown
NEONATEOUTCOME - note there are 2, one with a colon (;) and one without		Has This Patient Delivered Live -Born Infants?	Has This Patient Delivered Live -Born Infants?	Values are as follows: - Yes - No - Unknown
Deb to follow-up		Patient's Live Born Child First	Patient's Live Born Child First Name	
Deb to follow-up		Patient's Live Born Child Middle Name	Patient's Live Born Child Middle Name	
Deb to follow-up		Patient's Live Born Child Last	Patient's Live Born Child Last Name	
Deb to follow-up		Child's Date of Birth	Child's Date of Birth	
Deb to follow-up		Patient's Live Born Child Hospital of Birth: Name	Patient's Live Born Child Hospital of Birth: Name	
Deb to follow-up		Hospital of Birth: Phone Number	Hospital of Birth: Phone Number	
Deb to follow-up		Hospital of Chid Birth: Street Address	Hospital of Chid Birth: Street Address	
Deb to follow-up		Hospital of Child Birth: City	Hospital of Child Birth: City	
Deb to follow-up		Hospital of Child Birth: County	Hospital of Child Birth: County	
Deb to follow-up		Hospital of Child Birth: State/County	Hospital of Child Birth: State/County	
Deb to follow-up		Hospital of Child Birth: Zip Code	Hospital of Child Birth: Zip Code	
Not currently captured on PowerForms		Ever Had a Positive HIV Test?	Ever Had a Positive HIV Test?	Values are as follows: - Yes - No - Refused - Don't Know/Unknown
Not currently captured on PowerForms		Date of First Positive HIV Test	Date of First Positive HIV Test	
		Ever Had a Negative HIV Test?		Values are as follows: - Yes - No - Refused - Don't Know/Unknown
Last negative HIV test result -- LASTNEGATIVEHIVTESTRESULT		Date of Last Negative HIV Test.	Date of Last Negative HIV Test.	
Number of HIV tests in past 2 years -- NUMBEROFHIVTESTSINPAST2YEARS		Number of Negative HIV Tests Within 24 Months Before First Positive Test (#)		
ON HAART?		Ever Taken Any Antiretrovirals (ARVs)?		Values are as follows: - Yes - No - Refused - Don't Know/Unknown
Mike to provide List of ARV medications		ARV Medication 1		
		ARV Medication 1 Last Documented		
		ARV Medication 2		
		ARV Medication 2 Last Documented		
		ARV Medication 3		
		ARV Medication 3 Last Documented		

REPORT NAME	BUSINESS REQUIREMENT	DATA FIELDS (Required Column)	FIELD DEFINITION (Data Element)	Field Object (Values) Refer to the STD Confidential Morbidity Report Form
STD Case Report	State mandated report and is required for STD cooperative agreement grant from the CDC. The same fields are used for STD surveillance, partner services, and case management activities which are critical to STD control.			
	Ordering physician	Clinician who diagnosed STD case	Report done by	
	Facility the encounter is registered to	Facility Name	Facility Name	
	Org/Facility	Facility Street	street address	
	Org/Facility	Facility City		
	Org/Facility	Facility State		
	Org/Facility	Facility Zip Code	City/State/Zip code	
	Org/Facility	Facility Phone		xxx-xxx-xxxx is the format
	Org/Facility -- not currently in the system, but could be added if needed for report; Cerner Core Team will need to build if needed on report.	Facility Fax	Tel/Fax	leave blank
	Registration	Patient Last name	Patient Last Name	
	Registration	Patient First name	First name	
	Registration	Patient Middle Initial	MI	
	Registration	Medical Record number	Medical Record number	
	Registration	Birthdate	Birthdate	mm/dd/yyyy
	Registration	Patient Street Address 1	Patient Street Address 1	
	Registration	Patient Street Address 2	Patient Street Address 2	
	Registration	Patient City	Patient City	
	Registration	Patient State	Patient State	
	Registration	Patient Zip Code	Patient Zip Code	
	Registration	Patient Home Phone	Patient Home Phone	xxx-xxx-xxxx is the format
	Registration	Patient Work Phone	Patient Work Phone	xxx-xxx-xxxx is the format
	Registration	Patient Cell Phone	Patient Cell Phone	xxx-xxx-xxxx is the format
	Registration	Patient Social Security Number	Patient Social Security Number	xxx-xx-xxxx is the format
	Registration	Patient Email Address	Email Address	
	problem list -- SNOMED CT = "Pregnant" = 191073013 (actual snomed ct code) Nomenclature_id = 7777483.00			No/Yes/Unk
	Active status	Patient Pregnant?	Patient Pregnant?	
	Last Menstrual Period - LASTMENSTRUALPERIOD	Date of Last Menstrual Period	LMP	date
	Partner pregnant - PARTNERPREGNANT	Partner Pregnant?	Partner Pregnant?	No/Yes/Unk
	Social History - SOGI		Current Gender: Male/Female/Transgender (M-F)/Transgender (F-M)/Unknown/Other	code value display
add	SHX Gender Identity - SHXGENDERIDENTITY	Current Gender:		code value display
	Registration	Biological Gender:		code value display
	Registration	Marital Status	Marital Status: Single/Married-Domestic Partner/Separated/Divorced/Widowed/Living with Partner	code value display
	Registration	Race	Race	code value display
	Registration	Ethnicity:	Ethnicity: Hispanic-Latino/Non-hispanic-Non Latino	code value display
	Registration	Primary Language:	Primary Language: English/Spanish/Other	code value display
	Sex Partner(s) Gender: 3 months - SEXPARTNERSGENDER3MONTHS	Gender of Sex Partner(s) - 3 months	Gender of Sex Partner(s): Male/Female/Transgender (M-F)/Transgender (F-M)/Unknown/Other/Refused	code value display
add	Sex Partner(s) Gender: 12 months - SEXPARTNERSGENDER12MONTHS	Gender of Sex Partner(s) - 12 months		code value display
	Diagnosis	Disease(s) being reported:	Disease(s) being reported: Chlamydia/Gonorrhea/Syphilis	ICD-10 (if multiple on a given encounter, output 1 row for each ICD-10)
	Lab Orders	orderable name		grouping of lab orders/results repeat 5 times; Need most recent on given encounter; Mike to provide a list of orderables. Work with the Lab Team on orderable names.
		site		grouping of lab orders/results repeat 5 times
		specimen type		grouping of lab orders/results repeat 5 times
		result		grouping of lab orders/results repeat 5 times
		Specimen Collection Date		grouping of lab orders/results repeat 5 times
	Allergy	Allergic to:	Allergic to: Penicillin/Cephalosporins (medications) and dose.	separate by semi-colon
	Medication Orders	medication	ceftriaxone 250mg IM Azithromycin 1g PO Azithromycin 2g PO Doxycycline 100mg BIDx7day Cefixime 400mg PO Benzathine Penicillin G 2.4MU IM once Doxycycline 100 bid x 14 d Doxycycline 100 bid x 28d	grouping of medication and treatment date repeat 3 times; Mike to provide a list of medication orderables working with the Pharmacy Team.
		Treatment Date	order date	grouping of medication and treatment date repeat 3 times
	Number of Partners (60 Days) - NUMBEROFPARTNERS60DAYS	Number of Partners (60 Days) GC & CT		
	Number of Partners (12 Months) - NUMBEROFPARTNERS12MONTHS	Number of Partners (12 Months) SY		
	Number of Partners Treated (60 days) - NUMBEROFPARTNERS12MONTHS	Number partners (60 days): Number Treated GC & CT	Number partners (60 days): Number Treated	
	Number of Partners Treated (12 Months) - NUMBEROFPARTNERS12MONTHS	Partner Information: Numbers partners (last 12 months): number treated SY	Partner Information: Numbers partners (last 12 months): number treated	
	NEONATEOUTCOME - note there are 2, one with a colon (-) and one without	Infants only: Live Birth/Still birth	Infants only: Live Birth/Still birth	
	Gestational Age at Time of Syphilis Treatment (weeks) - GESTATIONALAGEATSYPHILLISTREATMENT	Gestation	Gestation	
	PREGNANCY1INFANTWEIGHT or WEIGHTMEASURED	Weight	Infant Weight	if <= 1 year old, report weight, otherwise blank.
	Infant's Serum RPR tier 4x mother's - INFANTSSERUMRPR4XMOTHERS	Infant's serum RPR tier 4x mothers? Yes/no	Infant's serum RPR tier 4x mothers? Yes/no	

	CONGENITALSYPHILISMOTHERSLASTNAME Congenital syphilis mother's first name - CONGENITALSYPHILISMOTHERSFIRSTNAME Congenital syphilis mother's middle initial - CONGENITALSYPHILISMOTHERSMI Congenital syphilis mother's MRN - CONGENITALSYPHILISMOTHERSMRN Congenital syphilis mother's birthdate - CONGENITALSYPHILISMOTHERSBIRTHDATE	Congenital Syphilis: provide mother's info:Last name/First name/MI/MRN/Birthdate	Congenital Syphilis: provide mother's info:Last name/First name/MI/MRN/Birthdate	display in 5 separate columns
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PERTUSSIS CASE REPORT

To be used by Local Health Jurisdictions to report to CDPH
 Providers: please use CMR and submit to Local Health Jurisdiction

PATIENT DEMOGRAPHICS

Patient's name (last, first, middle initial)		DOB (month / day / year) / /		Age (enter age and check one) <input type="checkbox"/> Days <input type="checkbox"/> Weeks <input type="checkbox"/> Months <input type="checkbox"/> Years	
Address (number and street)		Apt #	City/town	State	Zip code
Phone number Home () Cell/Work()		Country of birth <input type="checkbox"/> USA <input type="checkbox"/> Other:		Date of arrival to USA / /	
Ethnicity (check one) <input type="checkbox"/> Hispanic/Latino <input type="checkbox"/> Non-Hispanic/Non-Latino <input type="checkbox"/> Unk			Gender <input type="checkbox"/> F <input type="checkbox"/> M <input type="checkbox"/> Unknown <input type="checkbox"/> Other (specify)		
Race (check all that apply)					
<input type="checkbox"/> Black/African-American		<input type="checkbox"/> Asian (please specify)		<input type="checkbox"/> Pacific Islander (please specify)	
<input type="checkbox"/> Native American/Alaskan Native		<input type="checkbox"/> Asian Indian		<input type="checkbox"/> Native Hawaiian	
<input type="checkbox"/> White		<input type="checkbox"/> Cambodian		<input type="checkbox"/> Guamanian	
<input type="checkbox"/> Unknown		<input type="checkbox"/> Chinese		<input type="checkbox"/> Samoan	
<input type="checkbox"/> Other: _____		<input type="checkbox"/> Filipino		<input type="checkbox"/> Laotian	
<input type="checkbox"/> Other Pacific Islander: _____					
Occupation		Setting (check all that apply): <input type="checkbox"/> Health Care <input type="checkbox"/> Day Care <input type="checkbox"/> School <input type="checkbox"/> Correctional Facility <input type="checkbox"/> Other, specify:			Primary Language

CLINICAL SIGNS AND SYMPTOMS AND COURSE OF ILLNESS * If fatal, notify CDPH immediately.

Cough <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unk		Cough onset date / /		Paroxysmal cough <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unk		Whoop <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unk		Post-tussive vomiting <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown	
Apnea <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unk		Cyanosis <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unk		Fever <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unk		Highest fever: °F/°C		Symptom onset date (if no cough) / /	
Other Symptoms If Yes, describe: <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unk			Cough duration at end of investigation <input type="checkbox"/> <14 days <input type="checkbox"/> ≥ 14 days <input type="checkbox"/> Unk			DOES CASE MEET CDC/CSTE CLINICAL CRITERIA? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown (FOR STATE USE ONLY)			
Pregnant <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown		If pregnant, estimated date of delivery / /		Hospitalized (≥24 hours) <input type="checkbox"/> Yes* <input type="checkbox"/> No <input type="checkbox"/> Unknown		Dates hospitalized / / to / /		Total # days hosp. _____ days	
Hospital name		Patient in ICU <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unk		Days in ICU		Intubated <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unk		Days intubated	
Seizures due to pertussis <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown		Receive exchange transfusion <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown		Receive ECMO <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unk		Chest x-ray for pneumonia <input type="checkbox"/> Positive <input type="checkbox"/> Negative <input type="checkbox"/> Not		Died* <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unk	
Date of death / /									

FOR INFANTS <4 MONTHS OF AGE

Mother's name (last, first, middle initial)		Mother's DOB (mm / dd / yyyy) / /		Prenatal care provider name (Clinician and/or Practice)	
Prenatal care provider location (street, city/town, state)		Does prenatal care provider participate in the Comprehensive Perinatal Services Program (CPSP)? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unk			
Mother's insurance type for prenatal care <input type="checkbox"/> Private <input type="checkbox"/> Medi-Cal Fee for Service (Pregnancy-only) <input type="checkbox"/> Medi-Cal Managed Care <input type="checkbox"/> Other					
Member ID #		Plan name			
Did mother receive Tdap during pregnancy? <input type="checkbox"/> Yes <input type="checkbox"/> No- she declined <input type="checkbox"/> No- never recommended <input type="checkbox"/> No - Other, why: _____ <input type="checkbox"/> Unk					
If yes: Date of Tdap vaccination? / /		<input type="checkbox"/> Unk		Weeks' Gestation: Trimester:	
Where did mother receive Tdap during this pregnancy? <input type="checkbox"/> Prenatal care provider's office <input type="checkbox"/> Pharmacy <input type="checkbox"/> LHD or other medical office					

VACCINATION / MEDICAL HISTORY

Has the patient ever received pertussis vaccine? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unk		Number of doses prior to illness onset:		Type of vaccine for last dose <input type="checkbox"/> Tdap <input type="checkbox"/> DTaP <input type="checkbox"/> DTP <input type="checkbox"/> Unk		Date of last dose / /	
Reason not vaccinated (check all that apply): <input type="checkbox"/> Personal Beliefs Exemption (PBE) <input type="checkbox"/> Permanent Medical Exemption (PME)							
<input type="checkbox"/> Temporary Medical Exemption <input type="checkbox"/> Under age for vaccination <input type="checkbox"/> Delay in starting series or between doses <input type="checkbox"/> Unknown <input type="checkbox"/> Other: _____							

PLEASE ENTER DOSE INFORMATION FOR ENTIRE SERIES FOR INFANTS <12 MONTHS OF AGE - (other ages optional)

#1: / /	#2: / /	#3: / /	#4: / /	#5: / /	#6: / /
<input type="checkbox"/> Date Unk	<input type="checkbox"/> Date Unk	<input type="checkbox"/> Date Unk	<input type="checkbox"/> Date Unk	<input type="checkbox"/> Date Unk	<input type="checkbox"/> Date Unk

LABORATORY INFO

CASE LAB CONFIRMED (FOR LHD USE) <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown			CASE LAB CONFIRMED (FOR STATE USE ONLY) <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown		
Culture performed <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown		Culture specimen date / /		Culture result <input type="checkbox"/> Positive <input type="checkbox"/> Negative <input type="checkbox"/> Indeterminate <input type="checkbox"/> Pending <input type="checkbox"/> Not done <input type="checkbox"/> Unk	
PCR performed <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown		PCR specimen date / /		PCR result <input type="checkbox"/> Positive <input type="checkbox"/> Negative <input type="checkbox"/> Indeterminate <input type="checkbox"/> Pending <input type="checkbox"/> Not done <input type="checkbox"/> Unk	
Other pertussis lab tests performed <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown		Other test specimen date / /		Specify other lab tests	
Other lab test results					



PERTUSSIS CASE REPORT

To be used by Local Health Jurisdictions to report to CDPH
 Providers: please use CMR and submit to Local Health Jurisdiction

EPIDEMIOLOGIC INFO

Contact to an infant <1 year of age? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown	Contact to a pregnant woman? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown	Other sensitive occupation/setting? Describe: <input type="checkbox"/> Child care <input type="checkbox"/> Healthcare <input type="checkbox"/> Other
Epi-linked to a lab-confirmed case <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown	Case name or case ID	Outbreak related (<i>LHD use only</i>) <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown
		Outbreak name or location

CONTACTS – this section is optional and for local health department use only

	Name	Cough onset date	Relationship	Age (years)	Same household	High risk*
1		/ /			<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unk	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unk
2		/ /			<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unk	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unk
3		/ /			<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unk	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unk
4		/ /			<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unk	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unk
5		/ /			<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unk	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unk
6		/ /			<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unk	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unk

*High risk indicates infant <1 year of age, pregnant woman or person with contact to infants <1 year of age or pregnant women

Number of contacts for whom antibiotics were recommended	Number of ill contacts
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TIMELINE OF INFECTIOUSNESS AND STAGES OF COUGH – this section is optional and for LHD use only

WEEK	Exposure Period (typically 7-10 days, range 5-21 days)			Infectious Period (from onset of catarrhal stage until 5 days after antibiotic treatment or 3 weeks after cough onset)					
	-5 weeks	-4 weeks	-3 weeks	-2 weeks	-1 week	Cough onset date	+1 week	+2 weeks	+3 weeks
Enter dates	/ /	/ /	/ /	/ /	/ /	/ /	/ /	/ /	/ /
Stages of illness	Usually no s/s of illness occur during this stage- N.A.			Catarrhal Stage (typically 1-2 weeks)			Paroxysmal Stage (may last weeks to months)		

CASE CLASSIFICATION (FOR LHD USE) <input type="checkbox"/> Confirmed <input type="checkbox"/> Probable <input type="checkbox"/> Suspect <input type="checkbox"/> Not a case <input type="checkbox"/> Unk	CASE CLASSIFICATION (FOR STATE USE ONLY) <input type="checkbox"/> Confirmed <input type="checkbox"/> Probable <input type="checkbox"/> Suspect <input type="checkbox"/> Not a case <input type="checkbox"/> Unknown
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COMMON LHD TRACKING DATA

CalREDIE or other LHD number	IZB case ID number		
Date reported to LHD / /	Date investigation started / /	Person/clinician reporting case	Reporter telephone (LHD USE ONLY) ()
Case investigator completing form		Investigator telephone ()	Investigator jurisdiction

REMARKS

2014 CASE DEFINITION

Clinical case definition: In the absence of a more likely diagnosis a cough illness lasting ≥ 2 weeks with one of the following symptoms:

- Paroxysm of coughing, OR
- Post-tussive vomiting, OR
- Inspiratory "whoop," OR
- Apnea (with or without cyanosis) (FOR INFANTS AGED <1 YEAR ONLY)

Case classification

Confirmed: 1) An acute cough illness of any duration with isolation of *B. pertussis* from a clinical specimen OR 2) A case that meets the clinical case definition and is confirmed by detection of *B. pertussis*-specific nucleic acid by polymerase chain reaction (PCR) OR 3) A case that meets the clinical case definition and is epidemiologically-linked directly to a laboratory-confirmed case of pertussis.

Probable: 1) A case that meets the clinical case definition and is not laboratory-confirmed with culture or PCR and is not epidemiologically-linked directly to a confirmed case. OR FOR INFANTS AGED <1 YEAR ONLY 2) Acute cough illness of any duration, with at least one of the following: (paroxysms of coughing, inspiratory "whoop", post-tussive vomiting, or apnea (with or without cyanosis) AND PCR positive for pertussis or contact to a laboratory-confirmed case of pertussis.

Suspect: 1) An acute cough illness of any duration with detection of *B. pertussis*-specific nucleic acid by PCR OR 2) An acute cough illness of any duration with at least one of the following: (paroxysms of coughing, inspiratory "whoop", or post-tussive vomiting) that is epidemiologically-linked directly to a confirmed case.

PERTUSSIS SUPPLEMENTAL FORM
for cases <4 months of age

Contact Mother of Infant Pertussis Case to complete Sections A and B

Section A.

Infant's name (last, first, middle initial)	Infant DOB (mm/dd/yyyy) / /	CalREDIE ID	Local ID
Mother's name (last, first, middle initial)	Mother DOB (mm/dd/yyyy) / /	CalREDIE ID (if applicable)	Local ID (if applicable)

Mother's ethnicity	Mother's race (check all that apply)			
<input type="checkbox"/> Hispanic/Latino <input type="checkbox"/> Non-Hispanic/Non-Latino <input type="checkbox"/> Unknown	<input type="checkbox"/> Black/African-American <input type="checkbox"/> Native American/Alaskan Native <input type="checkbox"/> White <input type="checkbox"/> Unknown <input type="checkbox"/> Other:	<input type="checkbox"/> Asian (please specify) <input type="checkbox"/> Asian Indian <input type="checkbox"/> Cambodian <input type="checkbox"/> Chinese <input type="checkbox"/> Filipino <input type="checkbox"/> Hmong <input type="checkbox"/> Japanese	<input type="checkbox"/> Korean <input type="checkbox"/> Laotian <input type="checkbox"/> Thai <input type="checkbox"/> Vietnamese <input type="checkbox"/> Other Asian:	<input type="checkbox"/> Pacific Islander (please specify) <input type="checkbox"/> Native Hawaiian <input type="checkbox"/> Guamanian <input type="checkbox"/> Samoan <input type="checkbox"/> Other Pacific Islander:

A1. Do you live with your baby? Yes No If no, in which county do you reside? Unknown

Prenatal Care Information

A2. Who provided your prenatal care during this pregnancy? (If >1 practice, list others at bottom of page)	A3. Prenatal care practice name/location	A4. Prenatal care phone number
--	--	--------------------------------

Mother's History

A5. Did you participate in WIC during this pregnancy?
 Yes- If yes, at what site? _____ No Don't know

A6. Did you receive Tdap (the shot that protects against whooping cough, tetanus, and diphtheria) during this pregnancy?
 Yes - If yes, during which trimester did you get it? First Second Third Don't know (If yes, skip to Section B)
 No
 Don't know
 Received it after delivery

A7. Did your prenatal care provider recommend that you receive Tdap during this pregnancy?
 Yes - If yes, why didn't you get it? I didn't want to get it - If so, why? _____
 I didn't or couldn't go to alternate site recommended
 What was alternate site? _____
 Insurance/payment issues (describe in detail): _____
 I delivered my baby before I could get it
 Other reason: _____
 No (Skip to section C)
 Don't know (Skip to section C)

A8. When your provider recommended the whooping cough shot, do you feel she/he gave you all of the information you needed?
 Yes
 No - If no, what was missing? _____

Section B. If mother received Tdap during this pregnancy, complete this section

B1. Where did you receive Tdap during this pregnancy?
 At a routine OB visit
 At a primary care physician visit
 At a pharmacy (specify name of pharmacy): _____
 At other site (specify name of site or clinician): _____
 Don't know

Name of person completing mother's form: _____	Phone number and/or Email address: _____	Date mother's interview completed: / /
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Other prenatal care provider practice(s) where care received during this pregnancy and their contact information.

Contact Prenatal Care Provider to complete Sections C and D

If mother received care at more than one practice, interview provider(s) who saw mother closest to 27-36 weeks gestation.

Section C.

Provider or Practice Name: _____	Name/phone number of person interviewed: _____
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C1. Is the provider a Comprehensive Perinatal Services Program (CPSP) provider? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown	C2. Prenatal care provider's NPI number: _____
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C3. Prenatal care provider type: OB FP NP Nurse Midwife Other: _____

C4. Is this practice affiliated with one or more Medical Groups/IPAs? Yes - Specify name(s): _____
 No, this is a solo practice.

C5. What health insurance coverage did the mother have in the last 3 months of pregnancy? (if covered by more than one insurer during this time period, record insurance coverage closest to 27 weeks gestation)

Private – Name of Company: _____ PPO HMO

Medi-Cal – Client Identification Number: _____ Managed Care – Name of Plan _____
 Fee-for-Service

C6. What immunization(s), if any, does the prenatal care provider stock? Tdap Influenza (flu) Other: _____
 None

C7. Did the prenatal care provider recommend Tdap to the mother during this pregnancy?
 Yes – If yes, is there documentation in the patient's chart of a recommendation for Tdap? Yes No
 No – If no, why wasn't Tdap recommended to the mother? _____ (Skip to C9)
 Unknown (Skip to C9)

C8. Did the provider refer the mother to receive Tdap off-site?
 Yes – If yes, where was the mother referred? (please specify location): _____
 Did you confirm that this site will administer Tdap to this patient? Yes No
 No, the provider offered Tdap on-site.
 No, there was no referral.

C9. Did the mother receive Tdap during this pregnancy?
 Yes No – If no, is there documentation in this patient's chart of the patient declining Tdap? Yes No
 (Skip to C15)
 Unknown (Skip to C15)
 Received it postpartum (Skip to C15)

C10. During which trimester and week of gestation was Tdap given?
 Trimester: First Second Third
 Date of vaccination: _____ Week of gestation: _____

C11. Which Tdap vaccine was given? Adacel Boostrix Unknown

C12. Where was Tdap given?

- On-site at this clinic (skip to C15)
- At a pharmacy (specify name of pharmacy): _____
- At other site (specify name of site or clinician): _____
- Unknown

C13. Did the provider follow up on mother's receipt of Tdap? Yes – If yes, how? _____ No

C14. Is off-site receipt of Tdap documented in the mother's medical record? Yes No

C15. Does the provider recommend influenza vaccine to pregnant patients? Yes No–If no, why not? _____

STOP HERE IF MOTHER RECEIVED TDAP ON-SITE FROM THIS PROVIDER DURING THIS PREGNANCY

Section D. (The public health department may follow up with clinic for additional details.)

D1. Has Tdap ever been offered on-site?

- Yes No Unknown

D2. Why isn't Tdap offered at this clinic?

- Do not have storage capacity
- Refrigerator and related equipment too expensive
- Do not have time for vaccine management/administration
- Vaccine cost too high. Paid \$_____per Tdap dose.
- Billing/coding too complicated
- Prenatal Tdap was not reimbursed/claims denied. Specify why _____
- Not financially sustainable with current reimbursement or contracting arrangements.
If so, for which Managed Care Plans (specify) _____ and/or Medical Groups (specify) _____

Please list which Managed Care Plans and/or Medical Groups include the cost of the vaccine dose in its capitation payments to your practice: _____

Other: _____

D3. Would the clinic consider starting to provide Tdap on-site?

- No – If no, why not? _____
- Unsure
- Yes – If yes, what would the clinic need to get this started?
 - Training on vaccine storage/handling
 - Training on vaccine administration
 - Training on billing
 - Help purchasing refrigerator and related equipment
 - Help procuring vaccine at lower cost
 - Other: _____

D4. If there is no plan to offer Tdap on-site, will the clinic attempt to ensure that pregnant patients are receiving Tdap off-site?

- Yes No If yes, how? _____

Name of person completing Sections C and D: _____	Phone number and/or Email address: _____	Date provider's interview completed: _____ / ____ / ____
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Section E. Local Health Department (LHD) follow-up activities

What resources did you provide to this practice? _____

Please specify:

- No follow up planned
- My LHD will take these follow-up steps by when?
1. Activity _____ Date _____
 2. Activity _____ Date _____

Instructions for LHD communicable disease staff:

1. Interview mother and complete Sections A and B
2. Contact the provider's office to complete Sections C and D. **Note:** Please prioritize complete responses for C2, C5, C6 and C9.
 - a. Ask office manager or nurse about Tdap vaccination practices in office. Ask follow-up questions as needed, such as, 'What are the logistical challenges/barriers to stocking Tdap in your practice?'
 - b. Validate whether mother received Tdap in office or not.
 - c. Ask office staff to review mother's prenatal records for all visits during the third trimester (or 3 months before birth) to determine if there is documentation of offer (or refusal) of Tdap, if given on-site.
 - d. If not given on-site, is there documentation of where the patient was referred, and if she actually did receive Tdap?
 - e. If Tdap was not recommended or offered due to reimbursement issues, please request denied claims.
 - f. If the mother saw two providers during her third trimester of pregnancy, interview both (time permitting) unless receipt or refusal of Tdap is documented during the first provider interview. Use additional forms as necessary.
 - g. If off-site receipt of Tdap is not documented in the mother's chart (C14), consider looking up doses in CAIR and include note to indicate you looked up her record in CAIR.
3. Submit form to CDPH with infant's case report by uploading into CalRedie or faxing to CDPH within one month of when the case is first identified. Please prioritize sending these case reports.
4. Meet with local MCAH and Immunization program staff to
 - a. Review the completed form, and
 - b. Plan who will follow up with the provider (if needed) to address barriers to Tdap coverage now and 3 months later (to see if practice changed)
 - c. **Please communicate to CDPH what resources you offered providers, your follow-up activities, and any best practices identified during follow up** – contact Amber Christiansen at amber.christiansen@cdph.ca.gov or (510) 620-3759.
5. Time-permitting, follow up with WIC sites where mothers are going to ensure WIC staff are providing education about prenatal Tdap or referral to local immunization clinics, as appropriate.

For questions on this form or process, contact Kathleen Winter at kathleen.winter@cdph.ca.gov or (510) 620-3770.



MEASLES (RUBEOLA) CASE REPORT

PATIENT DEMOGRAPHICS

Patient name—last	first	middle initial	Date of birth ____/____/____	Age (enter age and check one) ____ <input type="checkbox"/> Days <input type="checkbox"/> Weeks <input type="checkbox"/> Months <input type="checkbox"/> Years	Gender <input type="checkbox"/> Male <input type="checkbox"/> Female
Address—number, street			City	State	ZIP code
Telephone number Home ()			Work ()		Email:

ETHNICITY (check one) <input type="checkbox"/> Hispanic/Latino <input type="checkbox"/> Non-Hispanic/ Non-Latino <input type="checkbox"/> Unknown	RACE (check all that apply) <input type="checkbox"/> Black/African-American <input type="checkbox"/> Native American/Alaskan Native <input type="checkbox"/> White <input type="checkbox"/> Unknown <input type="checkbox"/> Other: _____	<input type="checkbox"/> Asian: <i>Please specify:</i> <input type="checkbox"/> Asian Indian <input type="checkbox"/> Hmong <input type="checkbox"/> Thai <input type="checkbox"/> Cambodian <input type="checkbox"/> Japanese <input type="checkbox"/> Vietnamese <input type="checkbox"/> Chinese <input type="checkbox"/> Korean <input type="checkbox"/> Other Asian: _____ <input type="checkbox"/> Filipino <input type="checkbox"/> Laotian	<input type="checkbox"/> Pacific Islander: <i>Please specify:</i> <input type="checkbox"/> Native Hawaiian <input type="checkbox"/> Guamanian <input type="checkbox"/> Samoan <input type="checkbox"/> Other Pacific Islander: _____
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Country of birth	Country of residence
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COMMON LHD TRACKING DATA

CMRID Number	IZB Case ID Number	WebCMR ID Number
Date reported to county ____/____/____	Date investigation started ____/____/____	Person/clinician reporting case
Case investigator completing form		Reporter telephone ()
Investigator telephone ()		Investigator's jurisdiction

SIGNS AND SYMPTOMS

Rash <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown	Rash onset date ____/____/____	Rash duration _____ days	Generalized rash <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown	Origin on body	Direction of spread
Fever <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown	Fever onset date ____/____/____	Was temperature taken <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown	Was temperature >101F (38.3C) <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown	If temperature not taken, skin was <input type="checkbox"/> Hot <input type="checkbox"/> Warm <input type="checkbox"/> Normal <input type="checkbox"/> Unknown	
Cough <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown	Runny nose (coryza) <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown	Conjunctivitis <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown		Koplik's spots <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown	
Other symptoms <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown	Describe other symptoms			Diagnosis date ____/____/____	
Does case meet clinical criteria for further investigation? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown			CASE MEETS CDC/CSTE CLINICAL CRITERIA? (FOR STATE USE ONLY) <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown		

COMPLICATIONS AND OTHER SYMPTOMS

Hospitalized <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown	Days hospitalized	Pneumonia <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown	Encephalitis <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown	Death <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown	If yes, date of death ____/____/____
Other complications <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown	If yes, describe other complications				

LABORATORY TESTS

Lab tests done for measles <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown	CASE LAB CONFIRMED (FOR LHD USE) <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown	CASE LAB CONFIRMED (FOR STATE USE ONLY) <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown	LAB RESULT CODES P = Positive N = Negative – Antibody not detected I = Indeterminate E = Pending X = Not Done U = Unknown		
Serology performed <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown	Specimen date ____/____/____	Result interpretation			
IgM	____/____/____	<input type="checkbox"/> P <input type="checkbox"/> N <input type="checkbox"/> I <input type="checkbox"/> E <input type="checkbox"/> X <input type="checkbox"/> U			
IgG (acute)	____/____/____	<input type="checkbox"/> P <input type="checkbox"/> N <input type="checkbox"/> I <input type="checkbox"/> E <input type="checkbox"/> X <input type="checkbox"/> U			
IgG (convalescent)	____/____/____	<input type="checkbox"/> P <input type="checkbox"/> N <input type="checkbox"/> I <input type="checkbox"/> E <input type="checkbox"/> X <input type="checkbox"/> U			
Specimen obtained for virus isolation <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown	Specimen source <input type="checkbox"/> Nasopharyngeal <input type="checkbox"/> Urine <input type="checkbox"/> Other <input type="checkbox"/> Unknown		Specimen date ____/____/____	Virus isolated <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown	Name of lab:
Specimen sent to CDC for genotyping <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown	Date sent ____/____/____	Virus genotype			
Other lab tests performed <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown	Other lab test specimen date ____/____/____	Specify other lab tests	Other lab test results		

VACCINATION/MEDICAL HISTORY

Received one or more doses of measles containing vaccine (MCV) <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown		Number of doses
Dates of vaccination—Dose 1 ___/___/___	Dose 2 ___/___/___	Dose 3 ___/___/___
Reason not vaccinated (check all that apply)		
1 <input type="checkbox"/> Personal Beliefs Exemption (PBE)	4 <input type="checkbox"/> Lab confirmation of previous disease	7 <input type="checkbox"/> Delay in starting series or between doses
2 <input type="checkbox"/> Permanent Medical Exemption (PME)	5 <input type="checkbox"/> MD diagnosis of previous disease	8 <input type="checkbox"/> Other
3 <input type="checkbox"/> Temporary Medical Exemption	6 <input type="checkbox"/> Under age for vaccination	9 <input type="checkbox"/> Unknown
Prior MD diagnosed measles (see reason 5) <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown	Pregnant <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown	Immunocompromised <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown

EPIDEMIOLOGICAL EXPOSURE HISTORY

Spread Setting (check all that apply)

1 <input type="checkbox"/> Day care	4 <input type="checkbox"/> Hospital Ward	7 <input type="checkbox"/> Home	10 <input type="checkbox"/> College	13 <input type="checkbox"/> Church
2 <input type="checkbox"/> School	5 <input type="checkbox"/> Hospital ER	8 <input type="checkbox"/> Work	11 <input type="checkbox"/> Military	14 <input type="checkbox"/> International travel
3 <input type="checkbox"/> Doctor's office	6 <input type="checkbox"/> Outpatient hospital clinic	9 <input type="checkbox"/> Unknown	12 <input type="checkbox"/> Correctional facility	15 <input type="checkbox"/> Other

Recent travel or arrival from other country or state within 18 days of rash onset? Yes No Unknown

Countries or states visited	Dates in countries or states visited	Date of arrival in California ___/___/___
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Close contact with person(s) with rash 8-17 days before rash onset? Yes No Unknown

Name	Rash onset date	Relationship	Age (Years)	Same household
1	___/___/___			<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown
2	___/___/___			<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown
3	___/___/___			<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown

Please list other contacts on a separate sheet or use the contact tracing work sheet.

Epi-linked to a lab-confirmed case? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown	Case name or case ID	Outbreak related <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown	Outbreak location
Import status <input type="checkbox"/> Indigenous <input type="checkbox"/> Out-of-state import <input type="checkbox"/> International Import	If case is indigenous, is case <input type="checkbox"/> Import-linked (linked to imported case) <input type="checkbox"/> Endemic <input type="checkbox"/> Unknown Source <input type="checkbox"/> Imported virus (viral genetic evidence indicates an imported genotype)		If case is imported, describe source

CONTACT INVESTIGATION

Spread Setting (check all that apply)

1 <input type="checkbox"/> Day care	4 <input type="checkbox"/> Hospital Ward	7 <input type="checkbox"/> Home	10 <input type="checkbox"/> College	13 <input type="checkbox"/> Church
2 <input type="checkbox"/> School	5 <input type="checkbox"/> Hospital ER	8 <input type="checkbox"/> Work	11 <input type="checkbox"/> Military	14 <input type="checkbox"/> International travel
3 <input type="checkbox"/> Doctor's office	6 <input type="checkbox"/> Outpatient hospital clinic	9 <input type="checkbox"/> Unknown	12 <input type="checkbox"/> Correctional facility	15 <input type="checkbox"/> Other

Number of susceptible contacts: _____

Close contacts who have rash 8-17 days after exposure to case (list below)
 Yes No Unknown

Name	Rash onset date	Relationship	Age (Years)	Same household
1	___/___/___			<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown
2	___/___/___			<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown
3	___/___/___			<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown

Please list other contacts on a separate sheet or use the contact tracing work sheet.

CASE CLASSIFICATION (FOR LHD USE) <input type="checkbox"/> Confirmed <input type="checkbox"/> Probable <input type="checkbox"/> Suspect <input type="checkbox"/> Not a case <input type="checkbox"/> Unknown	CASE CLASSIFICATION (FOR STATE USE ONLY) <input type="checkbox"/> Confirmed <input type="checkbox"/> Probable <input type="checkbox"/> Suspect <input type="checkbox"/> Not a case <input type="checkbox"/> Unknown
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MEASLES CASE DEFINITION

Clinical case definition: An illness characterized by all the following: (1) a generalized rash lasting greater than or equal to 3 days, (2) a temperature greater than or equal to 101.0°F (greater than or equal to 38.3°C), and (3) cough, coryza, or conjunctivitis.

Laboratory criteria for diagnosis: Positive serologic test for measles immunoglobulin M antibody; significant rise in measles antibody level by any standard serologic assay; or isolation of measles virus from a clinical specimen.

Case classification
Suspected: any febrile illness accompanied by rash.
Probable: a case that meets the clinical case definition, has noncontributory or no serologic or virologic testing, and is not epidemiologically linked to a confirmed case.
Confirmed: a case that is laboratory confirmed or that meets the clinical case definition and is epidemiologically linked to a confirmed case (a laboratory-confirmed case does not need to meet the clinical case definition).



Mail to: California Department of Public Health
 Immunization Branch
 850 Marina Bay Parkway
 Building P, 2nd Floor, MS 7313
 Richmond, CA 94804-6403
 Or Fax to: (510) 620-3949

MUMPS CASE REPORT

PATIENT DEMOGRAPHICS

Patient name—last		first	middle initial	Date of birth	Age (enter age and check one)			Gender			
				___/___/___	___	<input type="checkbox"/> Days	<input type="checkbox"/> Weeks	<input type="checkbox"/> Months	<input type="checkbox"/> Years	<input type="checkbox"/> Male	<input type="checkbox"/> Female
Address—number, street				City	State	ZIP code	County				
Telephone number						Email:					
Home ()						Work ()					
ETHNICITY (check one)		RACE (check all that apply)									
<input type="checkbox"/> Hispanic/Latino		<input type="checkbox"/> Black/African-American		<input type="checkbox"/> Asian: Please specify:				<input type="checkbox"/> Pacific Islander: Please specify:			
<input type="checkbox"/> Non-Hispanic/ Non-Latino		<input type="checkbox"/> Native American/Alaskan Native		<input type="checkbox"/> Asian Indian		<input type="checkbox"/> Hmong		<input type="checkbox"/> Thai		<input type="checkbox"/> Native Hawaiian	
<input type="checkbox"/> Unknown		<input type="checkbox"/> White		<input type="checkbox"/> Cambodian		<input type="checkbox"/> Japanese		<input type="checkbox"/> Vietnamese		<input type="checkbox"/> Guamanian	
		<input type="checkbox"/> Unknown		<input type="checkbox"/> Chinese		<input type="checkbox"/> Korean		<input type="checkbox"/> Other Asian:		<input type="checkbox"/> Samoan	
		<input type="checkbox"/> Other: _____		<input type="checkbox"/> Filipino		<input type="checkbox"/> Laotian				<input type="checkbox"/> Other Pacific Islander:	
Country of birth						Country of residence					

COMMON LHD TRACKING DATA

CMRID Number		IZB Case ID Number		WebCMR ID Number	
Date reported to county	Date investigation started	Person/clinician reporting case			Reporter telephone
___/___/___	___/___/___				()
Case investigator completing form		Investigator telephone		Investigator's jurisdiction	
		()			

SIGNS AND SYMPTOMS

Parotitis or salivary gland swelling		Swelling onset date	Swelling duration	Upper respiratory infection symptoms (e.g., sore throat, cough)		
<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown		___/___/___	_____ days	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown onset: ___/___/___		
Other symptoms		Describe other symptoms		Other symptom onset date		Diagnosis date
<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown				___/___/___		___/___/___
Does case meet clinical criteria for further investigation				CASE MEETS CDC/CSTE CLINICAL CRITERIA? (FOR STATE USE ONLY)		
<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown				<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown		

COMPLICATIONS AND OTHER SYMPTOMS

Hospitalized		Days hospitalized	Meningitis		Encephalitis		Orchitis		
<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown			<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown		<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown		<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown		
Other complications?		Describe other complications				Death		Date of death	
<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown						<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown		___/___/___	
Pregnant		Immunocompromised		Other High Risk (healthcare worker, college student)					
<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown		<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown		<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown					

LABORATORY TESTS

Any lab tests done for mumps		CASE LAB CONFIRMED (FOR LHD USE)		CASE LAB CONFIRMED (FOR STATE USE ONLY)		LAB RESULT CODES			
<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown		<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown		<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown		P = Positive N = Negative – Antibody not detected I = Indeterminate E = Pending X = Not Done U = Unknown			
Serology performed		Specimen date		Result interpretation					
<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown		___/___/___		<input type="checkbox"/> P <input type="checkbox"/> N <input type="checkbox"/> I <input type="checkbox"/> E <input type="checkbox"/> X <input type="checkbox"/> U					
IgM		___/___/___		<input type="checkbox"/> P <input type="checkbox"/> N <input type="checkbox"/> I <input type="checkbox"/> E <input type="checkbox"/> X <input type="checkbox"/> U					
IgG (acute)		___/___/___		<input type="checkbox"/> P <input type="checkbox"/> N <input type="checkbox"/> I <input type="checkbox"/> E <input type="checkbox"/> X <input type="checkbox"/> U					
IgG (convalescent)		___/___/___		<input type="checkbox"/> P <input type="checkbox"/> N <input type="checkbox"/> I <input type="checkbox"/> E <input type="checkbox"/> X <input type="checkbox"/> U					
Specimen collected for PCR?		Specimen Source		Specimen date		PCR result		Name of Lab:	
<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown		<input type="checkbox"/> Buccal <input type="checkbox"/> Urine <input type="checkbox"/> Other <input type="checkbox"/> Unknown		___/___/___		<input type="checkbox"/> Positive <input type="checkbox"/> Negative <input type="checkbox"/> Unknown			
Virus isolation attempted?		Specimen Source		Specimen date		Virus isolated		Name of Lab:	
<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown		<input type="checkbox"/> Buccal <input type="checkbox"/> Urine <input type="checkbox"/> Other <input type="checkbox"/> Unknown		___/___/___		<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown			
Specimen sent for genotyping		Date sent		Virus Genotype					
<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown		___/___/___							
Other lab tests performed		Other lab test specimen date		Specify other lab tests		Other lab test results			
<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown		___/___/___							

VACCINATION/MEDICAL HISTORY

Received one or more doses of mumps containing vaccine <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown	Number of doses
Dates of vaccination—Dose 1 ___/___/___	Dose 2 ___/___/___
Dose 3 ___/___/___	
Reason not vaccinated (check all that apply)	
1 <input type="checkbox"/> Personal Beliefs Exemption (PBE)	4 <input type="checkbox"/> Lab confirmation of previous disease
2 <input type="checkbox"/> Permanent Medical Exemption (PME)	5 <input type="checkbox"/> MD diagnosis of previous disease
3 <input type="checkbox"/> Temporary Medical Exemption	6 <input type="checkbox"/> Under age for vaccination
	7 <input type="checkbox"/> Delay in starting series or between doses
	8 <input type="checkbox"/> Other
	9 <input type="checkbox"/> Unknown

EPIDEMIOLOGICAL EXPOSURE HISTORY

Acquisition Setting (check all that apply)

1 <input type="checkbox"/> Day care	4 <input type="checkbox"/> Hospital Ward	7 <input type="checkbox"/> Home	10 <input type="checkbox"/> College	13 <input type="checkbox"/> Church
2 <input type="checkbox"/> School	5 <input type="checkbox"/> Hospital ER	8 <input type="checkbox"/> Work	11 <input type="checkbox"/> Military	14 <input type="checkbox"/> International travel
3 <input type="checkbox"/> Doctor's office	6 <input type="checkbox"/> Outpatient hospital clinic	9 <input type="checkbox"/> Unknown	12 <input type="checkbox"/> Correctional facility	15 <input type="checkbox"/> Other

Other significant exposures:

Recent travel or arrival from other country or state within 25 days of parotitis onset? Yes No Unknown

Countries or states visited	Dates in countries or states visited	Date of arrival in California ___/___/___
-----------------------------	--------------------------------------	--

Close contact with person(s) with mumps 14-25 days before parotitis onset? Yes No Unknown

Name	Parotitis Onset Date	Relationship	Age (Years)	Same Household
1	___/___/___			<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown
2	___/___/___			<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown
3	___/___/___			<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown

Please list other contacts on a separate sheet or use the contact tracing work sheet.

Epi-linked to a lab-confirmed case? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown	Case Name or Case ID	Outbreak related <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown	Outbreak Name or Location
Import status <input type="checkbox"/> Indigenous <input type="checkbox"/> Out-of-state import <input type="checkbox"/> International Import	If case is indigenous, is case <input type="checkbox"/> Import-linked (linked to imported case) <input type="checkbox"/> Endemic <input type="checkbox"/> Unknown Source <input type="checkbox"/> Imported virus (viral genetic evidence indicates an imported genotype)		If case is Import, describe source

CONTACT INVESTIGATION

Spread Setting (check all that apply)

1 <input type="checkbox"/> Day care	4 <input type="checkbox"/> Hospital Ward	7 <input type="checkbox"/> Home	10 <input type="checkbox"/> College	13 <input type="checkbox"/> Church
2 <input type="checkbox"/> School	5 <input type="checkbox"/> Hospital ER	8 <input type="checkbox"/> Work	11 <input type="checkbox"/> Military	14 <input type="checkbox"/> International travel
3 <input type="checkbox"/> Doctor's office	6 <input type="checkbox"/> Outpatient hospital clinic	9 <input type="checkbox"/> Unknown	12 <input type="checkbox"/> Correctional facility	15 <input type="checkbox"/> Other

Number of susceptible contacts: _____

Close contacts who have mumps 14-25 days after exposure to case (list below)
 Yes No Unknown

Name	Parotitis onset date	Relationship	Age (Years)	Same Household
1	___/___/___			<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown
2	___/___/___			<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown
3	___/___/___			<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown

Please list other contacts on a separate sheet or use the contact tracing work sheet.

CASE CLASSIFICATION (FOR LHD USE) <input type="checkbox"/> Confirmed <input type="checkbox"/> Probable <input type="checkbox"/> Suspect <input type="checkbox"/> Not a case <input type="checkbox"/> Unknown	CASE CLASSIFICATION (FOR STATE USE ONLY) <input type="checkbox"/> Confirmed <input type="checkbox"/> Probable <input type="checkbox"/> Suspect <input type="checkbox"/> Not a case <input type="checkbox"/> Unknown
--	---

MUMPS CASE DEFINITION

Clinical case definition: An illness with acute onset of unilateral or bilateral tender, self-limited swelling of the parotid and or other salivary gland(s), lasting at least 2 days, and without other apparent cause.

Clinically compatible illness: Infection with mumps virus may present as aseptic meningitis, encephalitis, hearing loss, orchitis, oophoritis, parotitis or other salivary gland swelling, mastitis or pancreatitis.

Laboratory criteria: Isolation of mumps virus from clinical specimen, OR detection of mumps nucleic acid (e.g., standard or real time RT-PCR assays), OR detection of mumps IgM antibody, OR demonstration of specific mumps antibody response in absence of recent vaccination, either a four-fold increase in IgG titer as measured by quantitative assays, or a seroconversion from negative to positive using a standard serologic assay of paired acute and convalescent serum specimens.

Case Classification

Suspected: Parotitis, acute salivary gland swelling, orchitis, or oophoritis unexplained by another more likely diagnosis, or a positive lab result with no mumps clinical symptoms (with or without epidemiological linkage to a confirmed or probable case).

Probable: Acute parotitis or other salivary gland swelling lasting at least 2 days, or orchitis or oophoritis unexplained by another more likely diagnosis, in either a person with a positive test for serum anti-mumps IgM antibody, or a person with epidemiologic linkage to another probable or confirmed case or linkage to a group/community defined by public health during an outbreak of mumps.

Confirmed: A positive mumps laboratory confirmation for mumps virus with RT-PCR or culture in a patient with an acute clinically compatible mumps illness

Tetanus Surveillance Worksheet

NAME (Last, First)				Hospital Record No.			
Address (Street and No.)			City	County	Zip	Phone	
Reporting Physician/Nurse/Hospital/Clinic/Lab Phone			Address			Phone	

.....DETACH HERE and transmit only lower portion if sent to CDC.....

CDC NETSS ID			County			State			Zip			
Birth Date			Age		Age Type		Race		Ethnicity		Sex	
<input type="text"/> / <input type="text"/> / <input type="text"/> <small>Month Day Year</small>			<input type="text"/> <input type="text"/> <small>Unknown= 999</small>		<input type="checkbox"/> 0 = 0-120 years <input type="checkbox"/> 1 = 0-11 months <input type="checkbox"/> 2 = 0-52 weeks		<input type="checkbox"/> N = Native Amer./Alaska Native <input type="checkbox"/> A = Asian/Pacific Islander <input type="checkbox"/> B = African American		<input type="checkbox"/> W = White <input type="checkbox"/> O = Other <input type="checkbox"/> U = Unknown		<input type="checkbox"/> H = Hispanic <input type="checkbox"/> N = Not Hispanic <input type="checkbox"/> U = Unknown	<input type="checkbox"/> M = Male <input type="checkbox"/> F = Female <input type="checkbox"/> U = Unknown
Event Date			Event Type			Reported			Imported		Report Status	
<input type="text"/> / <input type="text"/> / <input type="text"/> <small>Month Day Year</small>			<input type="checkbox"/> 1 = Onset Date <input type="checkbox"/> 2 = Diagnosis Date <input type="checkbox"/> 3 = Lab Test Done <input type="checkbox"/> 4 = Reported to County			<input type="checkbox"/> 5 = Reported to State or MMWR Report Date <input type="checkbox"/> 6 = Unknown			<input type="text"/> / <input type="text"/> / <input type="text"/> <small>Month Day Year</small>		<input type="checkbox"/> 1 = Indigenous <input type="checkbox"/> 2 = International <input type="checkbox"/> 3 = Out of State <input type="checkbox"/> 9 = Unknown	<input type="checkbox"/> 1 = Confirmed <input type="checkbox"/> 2 = Probable <input type="checkbox"/> 3 = Suspect <input type="checkbox"/> 9 = Unknown

HISTORY	Date Year of Onset		Acute Wound Identified?		Date Wound Occurred		Principal Anatomic Site			
	<input type="text"/> / <input type="text"/> / <input type="text"/> <small>Month Day Year</small>		<input type="checkbox"/> Y = Yes <input type="checkbox"/> N = No <input type="checkbox"/> U = Unknown		<input type="text"/> / <input type="text"/> / <input type="text"/> <small>Month Day Year</small>		<input type="checkbox"/> 1 = Head <input type="checkbox"/> 2 = Trunk <input type="checkbox"/> 3 = Upper Extremity <input type="checkbox"/> 4 = Lower Extremity <input type="checkbox"/> 9 = Unspecified			
	Occupation		Work Related?		Environment		Circumstances			
	History of Military Service (Active or Reserve)? <input type="checkbox"/> Y = Yes <input type="checkbox"/> N = No <input type="checkbox"/> U = Unknown		Year of Entry into Military Service		<input type="checkbox"/> Y = Yes <input type="checkbox"/> N = No <input type="checkbox"/> U = Unknown		<input type="checkbox"/> 0 = Home <input type="checkbox"/> 1 = Other Indoors <input type="checkbox"/> 2 = Farm / Yard <input type="checkbox"/> 3 = Automobile <input type="checkbox"/> 4 = Other Outdoors <input type="checkbox"/> 9 = Unknown			
CLINICAL DATA	Tetanus Toxoid Vaccination History Prior to Tetanus Disease (Exclude Doses Received Since Acute Injury)		Principal Wound Type		Wound Contaminated?					
	<input type="checkbox"/> 0 = Never <input type="checkbox"/> 1 = 1 dose <input type="checkbox"/> 2 = 2 doses <input type="checkbox"/> 3 = 3 doses <input type="checkbox"/> 4 = 4+ doses <input type="checkbox"/> 9 = Unknown		Years Since Last Dose		<input type="checkbox"/> 1 = Puncture <input type="checkbox"/> 2 = Stellate Laceration <input type="checkbox"/> 3 = Linear Laceration <input type="checkbox"/> 4 = Crush <input type="checkbox"/> 5 = Abrasion <input type="checkbox"/> 6 = Avulsion <input type="checkbox"/> 7 = Burn <input type="checkbox"/> 8 = Frostbite <input type="checkbox"/> 9 = Compound Fracture <input type="checkbox"/> 10 = Other (e.g. with cancer) Specify: _____ <input type="checkbox"/> 11 = Surgery		<input type="checkbox"/> Y = Yes <input type="checkbox"/> N = No <input type="checkbox"/> U = Unknown			
	<input type="checkbox"/> 0 - 98 <input type="checkbox"/> 99 = Unknown		Depth of Wound		Signs of Infection?		Devitalized, Ischemic, or Denervated Tissue Present?			
		<input type="checkbox"/> 1 = 1 cm. or less <input type="checkbox"/> 2 = more than 1 cm. <input type="checkbox"/> 9 = Unknown		<input type="checkbox"/> Y = Yes <input type="checkbox"/> N = No <input type="checkbox"/> U = Unknown		<input type="checkbox"/> Y = Yes <input type="checkbox"/> N = No <input type="checkbox"/> U = Unknown				

MEDICAL CARE PRIOR TO ONSET	Was Medical Care Obtained For This Acute Injury		Tetanus Toxoid (TT/Td/Tdap) Administered Before Tetanus Onset		If Yes, How Soon After Injury?				
	<input type="checkbox"/> Y = Yes <input type="checkbox"/> N = No <input type="checkbox"/> U = Unknown		<input type="checkbox"/> Y = Yes <input type="checkbox"/> N = No <input type="checkbox"/> U = Unknown		<input type="checkbox"/> 1 = < 6 Hours <input type="checkbox"/> 2 = 7 - 23 Hours <input type="checkbox"/> 3 = 1 - 4 Days <input type="checkbox"/> 4 = 5 - 9 Days <input type="checkbox"/> 5 = 10 - 14 Days <input type="checkbox"/> 6 = 15+ Days <input type="checkbox"/> 9 = Unknown				
	Wound Debrided Before Tetanus Onset		If Yes, Debrided How Soon After Injury		Tetanus Immune Globulin (TIG) Prophylaxis Received Before Tetanus Onset		If Yes, TIG Given How Soon After Injury?		Dosage (Units)
<input type="checkbox"/> Y = Yes <input type="checkbox"/> N = No <input type="checkbox"/> U = Unknown		<input type="checkbox"/> 1 = < 6 Hours <input type="checkbox"/> 2 = 7 - 23 Hours <input type="checkbox"/> 3 = 1 - 4 Days <input type="checkbox"/> 4 = 5 - 9 Days <input type="checkbox"/> 5 = 10 - 14 Days <input type="checkbox"/> 6 = 15+ Days <input type="checkbox"/> 9 = Unknown		<input type="checkbox"/> Y = Yes <input type="checkbox"/> N = No <input type="checkbox"/> U = Unknown		<input type="checkbox"/> 1 = < 6 Hours <input type="checkbox"/> 2 = 7 - 23 Hours <input type="checkbox"/> 3 = 1 - 4 Days <input type="checkbox"/> 4 = 5 - 9 Days <input type="checkbox"/> 5 = 10 - 14 Days <input type="checkbox"/> 6 = 15+ Days <input type="checkbox"/> 9 = Unknown		<input type="text"/> / <input type="text"/> / <input type="text"/> <small>0 - 998 999 = Unknown</small>	
Associated Condition (if no Acute Injury)		Describe Condition:		Diabetes?	If Yes, Insulin-Dependent?	Parenteral Drug Abuse?	Describe Condition:		
<input type="checkbox"/> 1 = Abscess <input type="checkbox"/> 2 = Ulcer <input type="checkbox"/> 3 = Blister <input type="checkbox"/> 4 = Gangrene <input type="checkbox"/> 5 = Cellulitis <input type="checkbox"/> 6 = Other Infection <input type="checkbox"/> 7 = Cancer <input type="checkbox"/> 8 = Gingivitis <input type="checkbox"/> 88 = None <input type="checkbox"/> 99 = Unknown				<input type="checkbox"/> Y = Yes <input type="checkbox"/> N = No <input type="checkbox"/> U = Unknown	<input type="checkbox"/> Y = Yes <input type="checkbox"/> N = No <input type="checkbox"/> U = Unknown	<input type="checkbox"/> Y = Yes <input type="checkbox"/> N = No <input type="checkbox"/> U = Unknown			

CLINICAL COURSE	Type of Tetanus Disease		TIG Therapy Given After Tetanus Onset		If Yes, How Soon After Illness Onset?			Dosage (Units)	
	<input type="checkbox"/> 1 = Generalized <input type="checkbox"/> 2 = Localized <input type="checkbox"/> 3 = Cephalic <input type="checkbox"/> 4 = Unknown		<input type="checkbox"/> Y = Yes <input type="checkbox"/> N = No <input type="checkbox"/> U = Unknown		<input type="checkbox"/> 1 = < 6 Hours <input type="checkbox"/> 2 = 7 - 23 Hours <input type="checkbox"/> 3 = 1 - 4 Days <input type="checkbox"/> 4 = 5 - 9 Days <input type="checkbox"/> 5 = 10 - 14 Days <input type="checkbox"/> 6 = 15+ Days <input type="checkbox"/> 9 = Unknown			<input type="text"/> / <input type="text"/> / <input type="text"/> <small>0 - 998 999 = Unknown</small>	
	Days Hospitalized		Days In ICU		Days Received Mechanical Ventilation				
<input type="text"/> / <input type="text"/> / <input type="text"/> <small>0 - 998 999 = Unknown</small>		<input type="text"/> / <input type="text"/> / <input type="text"/> <small>0 - 998 999 = Unknown</small>		<input type="text"/> / <input type="text"/> / <input type="text"/> <small>0 - 998 999 = Unknown</small>					
Outcome One Month After Onset?					If Died, Date of Death				
<input type="checkbox"/> R = Recovered <input type="checkbox"/> C = Convalescing <input type="checkbox"/> D = Died					<input type="text"/> / <input type="text"/> / <input type="text"/> <small>Month Day Year</small>				

CS106190 02/09

Tetanus Surveillance Worksheet

NAME (Last, First)				Hospital Record No.	
Address (Street and No.)		City	County	Zip	Phone
Reporting Physician/Nurse/Hospital/Clinic/Lab Phone		Address		Phone	

-----DETACH HERE and transmit only lower portion if sent to CDC-----

NEONATAL (<28 DAYS OLD)	Mother's Age in Years <input type="text"/> <input type="text"/> 99 = Unknown	Mother's Birth Date <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> Month Day Year	Date Mother's Arrival in U.S. <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> Month Day Year	Mother's Tetanus Toxoid Vaccination History PRIOR to Child's Disease (Known Doses Only) <input type="checkbox"/> 0 = Never <input type="checkbox"/> 1 = 1 dose <input type="checkbox"/> 2 = 2 doses <input type="checkbox"/> 3 = 3 doses <input type="checkbox"/> 4 = 4+ doses <input type="checkbox"/> 9 = Unknown	Years Since Mother's Last Dose <input type="text"/> <input type="text"/> 0 - 98 99 = Unknown
	Child's Birthplace <input type="checkbox"/> 1 = Hospital <input type="checkbox"/> 2 = Home <input type="checkbox"/> 3 = Other <input type="checkbox"/> 9 = Unknown	Birth Attendant(s) <input type="checkbox"/> 1 = Physician <input type="checkbox"/> 2 = Nurse <input type="checkbox"/> 3 = Licensed Midwife <input type="checkbox"/> 4 = Unlicensed Midwife <input type="checkbox"/> 5 = Other <input type="checkbox"/> 9 = Unknown		Other Birth Attendant(s) (If Not Previously Listed)	
Other Comments? <input type="checkbox"/> Y = Yes <input type="checkbox"/> N = No <input type="checkbox"/> U = Unknown	Reporter's Name		Title		
Institution Name			Phone Number		Date Reported
			<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>		<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> Month Day Year

Clinical Case Definition*:

Acute onset of hypertonia and/or painful muscular contractions (usually of the muscles of the jaw and neck) and generalized muscle spasms

Case Classification*:

Confirmed: A clinically compatible case, as reported by a health-care professional.

Notes/Other Information:

CDC. Case Definitions for Infectious Conditions Under Public Health Surveillance. MMWR 1997;46(No. RR-10):39

DIPHTHERIA CASE REPORT

Patient name—last		first	middle initial	Date of birth	Age	Sex
Address—number, street			City	State	County	ZIP code
Telephone number						
Home ()			Work ()			
RACE (check one)					ETHNICITY (check one)	
<input type="checkbox"/> African-American/Black <input type="checkbox"/> White <input type="checkbox"/> Native American <input type="checkbox"/> Asian/Pacific Islander <input type="checkbox"/> Other _____					<input type="checkbox"/> Hispanic/Latino <input type="checkbox"/> Non-Hispanic/Non-Latino	
If Asian/Pacific Islander, please check one:						
<input type="checkbox"/> Asian Indian		<input type="checkbox"/> Cambodian		<input type="checkbox"/> Chinese		<input type="checkbox"/> Filipino
<input type="checkbox"/> Japanese		<input type="checkbox"/> Korean		<input type="checkbox"/> Laotian		<input type="checkbox"/> Samoan
				<input type="checkbox"/> Vietnamese		<input type="checkbox"/> Other _____

PRESENT ILLNESS

Onset date (mm/dd/yy)	Diagnosis date (mm/dd/yy)	Hospitalized <input type="checkbox"/> Yes <input type="checkbox"/> No	Attending physician or consultant physician	Telephone number ()
Admit date (mm/dd/yy)	Discharge date (mm/dd/yy)	Medical record number	Hospital name	Telephone number ()
Brief clinical description (include nature and location of membrane, history of contact, probable source, etc.) (List household contacts in Remarks section.)				Outcome of case <input type="checkbox"/> Recovered <input type="checkbox"/> Sequelae <input type="checkbox"/> Died—Date: _____

HISTORY OF PREVIOUS IMMUNIZATION *(Check one)* Yes No

		Date Given	Dose	Type of Product (If known) (1) fluid toxoid OR (2) precipitated or adsorbed toxoid
Primary Immunization	First			
	Second			
	Third			
Boosters	First			
	Second			

Comments

OTHER THERAPY—SPECIFIC *(Check one)* Yes No

Antitoxin	Date	Hour	Units	Route of Administration	Manufacturer
First dose					
Second dose					
Third dose					

Therapeutic response: Prompt Delayed None

Other medical treatment (specify product)	Date of first dose	Date of second dose
---	--------------------	---------------------

Name of attending physician	Address
-----------------------------	---------

BASIS FOR DIAGNOSIS

Clinical only Laboratory tests Note: Positive cultures may be sent to the State Laboratory for virulence test and typing.

Type of Test	Date	Results	Name and Address of Laboratory
<input type="checkbox"/> Smear			
<input type="checkbox"/> Culture			
<input type="checkbox"/> Virulence			

PATIENT'S TRAVEL INFORMATION

Country of Residence

 United States Other, specify _____ .Date of U.S. arrival ____/____/____
MM DD YYHistory of **International** Travel (two weeks prior to the onset) Yes No Unknown If yes, please provide the following information:

Country(s) Visited	Month/Day/Year	Month/Day/Year
1.	From:	To:
2.	From:	To:
3.	From:	To:
4.	From:	To:
5.	From:	To:

History of **Interstate** Travel (two weeks prior to the onset) Yes No Unknown If yes, please provide the following information:

State(s) Visited	Month/Day/Year	Month/Day/Year
1.	From:	To:
2.	From:	To:
3.	From:	To:
4.	From:	To:
5.	From:	To:

Known exposure to Diphtheria cases or carrier? Yes No Unknown If yes, when _____ where _____Known exposure to international travelers? Yes No Unknown If yes, when _____ where _____Known exposure to immigrants? Yes No Unknown If yes, when _____ where _____**REMARKS** (Include comment if pertinent regarding occupation, economic status, environment, etc. Also note if other cases known in area or if this is single sporadic case.)

Investigator name (print)	Date	Telephone number ()
Agency name		

CASE DEFINITION

CDC/MMWR, October 19, 1990/Vol. 39/No. RR-13 "Case Definitions for Public Health Surveillance."

Diphtheria**Case definition/clinical description:**

An upper respiratory tract illness characterized by sore throat, low-grade fever, and an adherent membrane of the tonsil(s), pharynx, and/or nose without other apparent cause (as reported by a health professional).

Laboratory criteria for diagnosis:

- Isolation of *Corynebacterium diphtheriae* from a clinical specimen.

Case classification:**Probable:** Meets the clinical case definition, is not laboratory confirmed, and is not epidemiologically linked to a laboratory-confirmed case.**Confirmed:** Meets the clinical case definition and is either laboratory confirmed or epidemiologically linked to a laboratory-confirmed case.**Comment:**

Cutaneous diphtheria should not be reported.

INVASIVE HAEMOPHILUS INFLUENZAE DISEASE CASE REPORT

PATIENT DEMOGRAPHICS						
Patient name—last		first	middle initial	Date of birth	Age (enter age and check one)	Gender
				____/____/____	____ <input type="checkbox"/> Days <input type="checkbox"/> Weeks <input type="checkbox"/> Months <input type="checkbox"/> Years	<input type="checkbox"/> Male <input type="checkbox"/> Female
Address—number, street			City	State	ZIP code	County
Telephone number					Email:	
Home ()			Work ()			
ETHNICITY (check one)		RACE (check all that apply)				
<input type="checkbox"/> Hispanic/Latino		<input type="checkbox"/> Black/African-American				
<input type="checkbox"/> Non-Hispanic/ Non-Latino		<input type="checkbox"/> Native American/Alaskan Native				
<input type="checkbox"/> Unknown		<input type="checkbox"/> White				
		<input type="checkbox"/> Unknown				
		<input type="checkbox"/> Other: _____				
		<input type="checkbox"/> Asian: Please specify:				
		<input type="checkbox"/> Asian Indian				
		<input type="checkbox"/> Hmong				
		<input type="checkbox"/> Thai				
		<input type="checkbox"/> Cambodian				
		<input type="checkbox"/> Japanese				
		<input type="checkbox"/> Vietnamese				
		<input type="checkbox"/> Chinese				
		<input type="checkbox"/> Korean				
		<input type="checkbox"/> Other Asian: _____				
		<input type="checkbox"/> Filipino				
		<input type="checkbox"/> Laotian				
		<input type="checkbox"/> Pacific Islander: Please specify:				
		<input type="checkbox"/> Native Hawaiian				
		<input type="checkbox"/> Guamanian				
		<input type="checkbox"/> Samoan				
		<input type="checkbox"/> Other Pacific Islander: _____				
Country of birth			Country of residence			
COMMON LHD TRACKING DATA						
CMRID Number		IZB Case ID Number		WebCMR ID Number		
Date reported to county		Date investigation started		Person/clinician reporting case		
____/____/____		____/____/____				
Case investigator completing form			Investigator telephone		Investigator's jurisdiction	
			()			
CLINICAL SYNDROME						
(check all that apply)						
<input type="checkbox"/> Meningitis				Date of onset of symptoms		
<input type="checkbox"/> Bacteremia				____/____/____		
<input type="checkbox"/> Epiglottitis				Date of diagnosis		
<input type="checkbox"/> Pneumonia				____/____/____		
<input type="checkbox"/> Other, describe: _____						
Does case meet clinical criteria for further investigation			CASE MEETS CDC/CSTE CLINICAL CRITERIA? (FOR STATE USE ONLY)			
<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown			<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown			
COMPLICATIONS AND OTHER SYMPTOMS						
Hospitalized		Days Hospitalized		Death		
<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown				<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown		
			Date of death		Other complications	
			____/____/____		<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown	
Describe other complications						
TREATMENT						
1. Were antibiotics given?		Antibiotic 1 code	Date started	Antibiotic codes:		
<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown			____/____/____	1 = Cefotaxime sodium		
				2 = Ceftriaxone sodium		
				3 = Ampicillin		
				4 = Chloramphenicol		
				5 = Ampicillin and chloramphenicol		
				6 = Rifampin		
				7 = Other		
				8 = None		
				9 = Unknown		
LABORATORY TESTS						
Any lab tests done?		CASE LAB CONFIRMED (FOR LHD USE)		CASE LAB CONFIRMED (FOR STATE USE ONLY)		
<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown		<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown		<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown		
Culture		Specimen date	Source of Specimen			
<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown		____/____/____	<input type="checkbox"/> Blood			
			<input type="checkbox"/> Joint			
			<input type="checkbox"/> CSF			
			<input type="checkbox"/> Pleural fluid			
			<input type="checkbox"/> Peritoneal fluid			
			<input type="checkbox"/> Pericardial fluid			
			<input type="checkbox"/> Placenta			
			<input type="checkbox"/> Other			
			<input type="checkbox"/> Unknown			
LAB RESULT CODES				Culture result		
P = Positive N = Negative I = Indeterminate E = Pending X = Not Done U = Unknown				<input type="checkbox"/> P <input type="checkbox"/> N <input type="checkbox"/> I <input type="checkbox"/> E <input type="checkbox"/> X <input type="checkbox"/> U		
Was isolate serotyped?		Isolate serotype				
<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown		<input type="checkbox"/> 1 = Type B <input type="checkbox"/> 2 = Not typeable <input type="checkbox"/> 3 = Other type _____ <input type="checkbox"/> 9 = Unknown				
Isolate forwarded to MDL for testing?		Date sent		MDL serotype		
<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown		____/____/____				
Isolate forwarded to CDC for testing?		Date sent		CDC serotype		
<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown		____/____/____				
CSF bacterial antigen screen		CSF bacterial antigen screen result				
<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown		<input type="checkbox"/> P <input type="checkbox"/> N <input type="checkbox"/> I <input type="checkbox"/> E <input type="checkbox"/> X <input type="checkbox"/> U				

VACCINATION/MEDICAL HISTORY

Is case < to 15 years of age? Yes No Unknown (If no, skip to question regarding pregnancy)

Received one or more doses of Hib-containing vaccine
 Yes No Unknown

Number of doses prior to illness onset

Vaccination Dates – Dose 1: ____/____/____
 Dose 2: ____/____/____
 Dose 3: ____/____/____
 Dose 4: ____/____/____

Reason not vaccinated (check all that apply)

1 <input type="checkbox"/> Personal Beliefs Exemption (PBE)	4 <input type="checkbox"/> Lab confirmation of previous disease	7 <input type="checkbox"/> Delay in starting series or between doses
2 <input type="checkbox"/> Permanent Medical Exemption (PME)	5 <input type="checkbox"/> MD diagnosis of previous disease	8 <input type="checkbox"/> Other
3 <input type="checkbox"/> Temporary Medical Exemption	6 <input type="checkbox"/> Under age for vaccination	9 <input type="checkbox"/> Unknown

Pregnant: Yes No Unknown
 Immunocompromised: Yes No Unknown

TRANSMISSION AND CONTACT INVESTIGATION

Spread Setting (check all that apply)

1 <input type="checkbox"/> Day care	4 <input type="checkbox"/> Hospital Ward	7 <input type="checkbox"/> Home	10 <input type="checkbox"/> College	13 <input type="checkbox"/> Church
2 <input type="checkbox"/> School	5 <input type="checkbox"/> Hospital ER	8 <input type="checkbox"/> Work	11 <input type="checkbox"/> Military	14 <input type="checkbox"/> International travel
3 <input type="checkbox"/> Doctor's office	6 <input type="checkbox"/> Outpatient hospital clinic	9 <input type="checkbox"/> Unknown	12 <input type="checkbox"/> Correctional facility	15 <input type="checkbox"/> Other

Number of contacts for whom antibiotic was recommended: _____
 Number of ill contacts: _____

CASE CLASSIFICATION (FOR LHD USE): Confirmed Probable Not a case Unknown
 CASE CLASSIFICATION (FOR STATE USE ONLY): Confirmed Probable Not a case Unknown

REMARKS

HAEMOPHILUS INFLUENZAE INVASIVE DISEASE CASE CLASSIFICATION

Clinical description: Invasive disease caused by *Haemophilus influenzae* may produce any of several clinical syndromes, including meningitis, bacteremia, epiglottitis, or pneumonia.

Laboratory criteria for diagnosis: Isolation of *H. influenzae* from a normally sterile site (e.g., blood or cerebrospinal fluid [CSF] or, less commonly, joint, pleural, or pericardial fluid).*

Case classification

Probable: a clinically compatible case with detection of *H. influenzae* type b antigen in CSF.

Confirmed: a clinically compatible case that is laboratory confirmed.

*Positive antigen test results from urine or serum samples are unreliable for diagnosis of *H. influenzae* disease.



RUBELLA (GERMAN MEASLES) CASE REPORT

PATIENT DEMOGRAPHICS

Patient name—last	first	middle initial	Date of birth ____/____/____	Age (enter age and check one) ____ <input type="checkbox"/> Days <input type="checkbox"/> Weeks <input type="checkbox"/> Months <input type="checkbox"/>	Gender <input type="checkbox"/> Male <input type="checkbox"/> Female
Address—number, street			City	State	ZIP code
Telephone number Home ()			Work ()		Email:

ETHNICITY (check one) <input type="checkbox"/> Hispanic/Latino <input type="checkbox"/> Non-Hispanic/ Non-Latino <input type="checkbox"/> Unknown	RACE (check all that apply) <input type="checkbox"/> Black/African-American <input type="checkbox"/> Native American/Alaskan Native <input type="checkbox"/> White <input type="checkbox"/> Unknown <input type="checkbox"/> Other: _____	<input type="checkbox"/> Asian: <i>Please specify:</i> <input type="checkbox"/> Asian Indian <input type="checkbox"/> Hmong <input type="checkbox"/> Thai <input type="checkbox"/> Cambodian <input type="checkbox"/> Japanese <input type="checkbox"/> Vietnamese <input type="checkbox"/> Chinese <input type="checkbox"/> Korean <input type="checkbox"/> Other Asian: _____ <input type="checkbox"/> Filipino <input type="checkbox"/> Laotian	<input type="checkbox"/> Pacific Islander: <i>Please specify:</i> <input type="checkbox"/> Native Hawaiian <input type="checkbox"/> Guamanian <input type="checkbox"/> Samoan <input type="checkbox"/> Other Pacific Islander: _____
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Country of birth	Country of residence
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COMMON LHD TRACKING DATA

CMRID Number	IZB Case ID Number	WebCMR ID Number
Date reported to county ____/____/____	Date investigation started ____/____/____	Person/clinician reporting case
Case investigator completing form		Investigator telephone ()
		Investigator's jurisdiction

SIGNS AND SYMPTOMS

Rash <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown	Rash onset date ____/____/____	Rash duration _____ days	Generalized rash <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown	Origin on body	Direction of spread
Fever <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown	Fever onset date ____/____/____	Was temperature taken <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown	Was temperature >99.0F (37.2C) <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown	If temperature not taken, skin was <input type="checkbox"/> Hot <input type="checkbox"/> Warm <input type="checkbox"/> Normal <input type="checkbox"/> Unknown	
Arthralgia/arthritis <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown	Lymphadenopathy <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown	Conjunctivitis <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown			
Other symptoms <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown	Describe other symptoms			Diagnosis date ____/____/____	
Does case meet clinical criteria for further investigation <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown			CASE MEETS CDC/CSTE CLINICAL CRITERIA? (FOR STATE USE ONLY) <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown		

COMPLICATIONS AND OTHER SYMPTOMS

Hospitalized <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown	If yes, number of days hospitalized	Encephalitis <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown	Death <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown	If yes, date of death ____/____/____
Other complications <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown	Describe other complications			

LABORATORY TESTS

Lab tests done for rubella <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown	CASE LAB CONFIRMED (FOR LHD USE) <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown	CASE LAB CONFIRMED (FOR STATE USE ONLY) <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown	LAB RESULT CODES P = Positive N = Negative – Antibody not detected I = Indeterminate E = Pending X = Not Done U = Unknown
Serology performed <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown	Specimen date ____/____/____	Result interpretation <input type="checkbox"/> P <input type="checkbox"/> N <input type="checkbox"/> I <input type="checkbox"/> E <input type="checkbox"/> X <input type="checkbox"/> U	
IgM	____/____/____	<input type="checkbox"/> P <input type="checkbox"/> N <input type="checkbox"/> I <input type="checkbox"/> E <input type="checkbox"/> X <input type="checkbox"/> U	
IgG (acute)	____/____/____	<input type="checkbox"/> P <input type="checkbox"/> N <input type="checkbox"/> I <input type="checkbox"/> E <input type="checkbox"/> X <input type="checkbox"/> U	
IgG (convalescent)	____/____/____	<input type="checkbox"/> P <input type="checkbox"/> N <input type="checkbox"/> I <input type="checkbox"/> E <input type="checkbox"/> X <input type="checkbox"/> U	
Specimen taken for virus isolation <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown	Specimen Source <input type="checkbox"/> Nasopharyngeal <input type="checkbox"/> Urine <input type="checkbox"/> Other <input type="checkbox"/> Unknown	Specimen date ____/____/____	Virus isolated <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown
Specimen sent to CDC for genotyping <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown	Date sent ____/____/____	Virus Genotype	
Other lab tests performed <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown	Other lab test specimen date ____/____/____	Specify other lab tests	Other lab test results

VACCINATION/MEDICAL HISTORY

Received one or more doses of rubella containing vaccine <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown		If yes, number of doses
Dates of vaccination—Dose 1 ___/___/___	Dose 2 ___/___/___	Dose 3 ___/___/___
Reason not vaccinated (check all that apply)		
1 <input type="checkbox"/> Personal Beliefs Exemption (PBE)	4 <input type="checkbox"/> Lab confirmation of previous disease	7 <input type="checkbox"/> Delay in starting series or between doses
2 <input type="checkbox"/> Permanent Medical Exemption (PME)	5 <input type="checkbox"/> MD diagnosis of previous disease	8 <input type="checkbox"/> Other
3 <input type="checkbox"/> Temporary Medical Exemption	6 <input type="checkbox"/> Under age for vaccination	9 <input type="checkbox"/> Unknown
Prior MD diagnosed rubella (see reason 5) <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown	Pregnant <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown	Immunocompromised <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown

EPIDEMIOLOGICAL EXPOSURE HISTORY

Setting (check all that apply)

1 <input type="checkbox"/> Day care	4 <input type="checkbox"/> Hospital Ward	7 <input type="checkbox"/> Home	10 <input type="checkbox"/> College	13 <input type="checkbox"/> Church
2 <input type="checkbox"/> School	5 <input type="checkbox"/> Hospital ER	8 <input type="checkbox"/> Work	11 <input type="checkbox"/> Military	14 <input type="checkbox"/> International travel
3 <input type="checkbox"/> Doctor's office	6 <input type="checkbox"/> Outpatient hospital clinic	9 <input type="checkbox"/> Unknown	12 <input type="checkbox"/> Correctional facility	15 <input type="checkbox"/> Other

Recent travel or arrival from other country or state within 23 days of rash onset? Yes No Unknown

Countries or states visited	Dates in countries or states visited	Date of arrival in California ___/___/___
-----------------------------	--------------------------------------	--

Close contact with person(s) with rash or person(s) with congenital rubella syndrome (CRS) 12-23 days before rash onset? Yes No Unknown

Name	Rash Onset Date	Relationship	Age (Years)	Same Household
1	___/___/___			<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown
2	___/___/___			<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown
3	___/___/___			<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown

Please list other contacts on a separate sheet or use the contact tracing work sheet.

Epi-linked to a lab-confirmed case? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown	Case Name or Case ID	Outbreak related <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown	Outbreak Name or Location
Import status <input type="checkbox"/> Indigenous <input type="checkbox"/> Out-of-state import <input type="checkbox"/> International Import	If case is indigenous, is case <input type="checkbox"/> Import-linked (linked to imported case) <input type="checkbox"/> Endemic <input type="checkbox"/> Unknown Source <input type="checkbox"/> Imported virus (viral genetic evidence indicates an imported genotype)		If case is imported, describe source

CONTACT INVESTIGATION

Setting (check all that apply)

1 <input type="checkbox"/> Day care	4 <input type="checkbox"/> Hospital Ward	7 <input type="checkbox"/> Home	10 <input type="checkbox"/> College	13 <input type="checkbox"/> Church
2 <input type="checkbox"/> School	5 <input type="checkbox"/> Hospital ER	8 <input type="checkbox"/> Work	11 <input type="checkbox"/> Military	14 <input type="checkbox"/> International travel
3 <input type="checkbox"/> Doctor's office	6 <input type="checkbox"/> Outpatient hospital clinic	9 <input type="checkbox"/> Unknown	12 <input type="checkbox"/> Correctional facility	15 <input type="checkbox"/> Other

Number of susceptible contacts	Number of susceptible contacts who are pregnant	Close contacts who have rash 12-23 days after exposure to case (list below) <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown
--------------------------------	---	--

Name	Rash Onset Date	Relationship	Age (Years)	Same Household
1	___/___/___			<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown
2	___/___/___			<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown
3	___/___/___			<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown

Please list other contacts on a separate sheet or use the contact tracing work sheet.

CASE CLASSIFICATION (FOR LHD USE) <input type="checkbox"/> Confirmed <input type="checkbox"/> Probable <input type="checkbox"/> Suspect <input type="checkbox"/> Not a case <input type="checkbox"/> Unknown	CASE CLASSIFICATION (FOR STATE USE ONLY) <input type="checkbox"/> Confirmed <input type="checkbox"/> Probable <input type="checkbox"/> Suspect <input type="checkbox"/> Not a case <input type="checkbox"/> Unknown
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RUBELLA (German measles) 2010 CASE DEFINITION CSTE Position Statement Number: 09-ID-55

Case classification

Suspected: Any generalized rash illness of acute onset that does not meet the criteria for probable or confirmed rubella or any other illness

Probable: In the absence of a more likely diagnosis, an illness characterized by all of the following: acute onset of generalized maculopapular rash; **AND** temperature greater than 99.0° F or 37.2° C, if measured; **AND** arthralgia, arthritis, lymphadenopathy, or conjunctivitis **AND** lack of epidemiologic linkage to a laboratory-confirmed case of rubella; **AND** noncontributory or no serologic or virologic testing.

Confirmed: A case with or without symptoms who has laboratory evidence of rubella infection confirmed by one or more of the following laboratory tests: isolation of rubella virus; **OR** detection of rubella-virus specific nucleic acid by polymerase chain reaction; **OR** significant rise between acute- and convalescent-phase titers in serum rubella immunoglobulin G antibody level by any standard serologic assay; **OR** positive serologic test for rubella immunoglobulin M (IgM) antibody;

OR

An illness characterized by all of the following: acute onset of generalized maculopapular rash; **AND** temperature greater than 99.0°F or 37.2°C; **AND** arthralgia, arthritis, lymphadenopathy, or conjunctivitis; **AND** epidemiologic linkage to a laboratory-confirmed case of rubella.

Congenital Rubella Syndrome Case Report

Date of Report:
Month Day Year

Date of last Evaluation of Infant:
Month Day Year

I PATIENT INFORMATION

Child's Name: Last First Middle

Current Address: (County, State and Zip Code) **Age Congenital Rubella Syndrome Diagnosed:**
 _____ Years _____ Months Less than 1 Month Unknown

Date of Birth: <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <small>Month Day</small> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <small>Year</small>	Birth Weight: _____ Grams _____ lbs. _____ oz. <input type="checkbox"/> Unknown	Gestational Age: _____ Weeks	Sex: <input type="checkbox"/> M <input type="checkbox"/> F <input type="checkbox"/> Unknown	Race: <input type="checkbox"/> American Indian or Alaska Native <input type="checkbox"/> Asian or Pacific Islander <input type="checkbox"/> Black <input type="checkbox"/> White <input type="checkbox"/> Other (specify) _____	Ethnicity: <input type="checkbox"/> Hispanic Origin <input type="checkbox"/> Not of Hispanic Origin <input type="checkbox"/> Unknown
--	---	--	--	---	--

II CLINICAL CHARACTERISTICS

	Yes	No	Unk.		Yes	No	Unk.
Cataracts	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Meningoencephalitis	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Hearing Loss	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Microcephaly	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Mental Retardation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Purpura	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Congenital Heart Disease	1. Patent Ductus Arteriosus			Enlarged Spleen	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	2. Peripheral Pulmonic Stenosis			Enlarged Liver	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	3. Congenital Heart Disease, Type Unknown			Long Bone Radiolucencies	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	4. Other (Specify) _____			Congenital Glaucoma	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
				Pigmentary Retinopathy	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Other Abnormalities: Yes No Unknown If Yes, specify _____

Is Child Living? Yes No Unknown
 If No, Date of Death
Month Day Year

Causes of Death: (from death certificate)
 1. _____
 2. _____

If Child Died, Was Autopsy Performed?
 Yes No Unknown

Final Anatomical Diagnosis:

III MATERNAL HISTORY

Mother's Name: Last First Middle **Age at Delivery:** _____ Years **Occupation at Time of Conception:** _____
 Unemployed Unknown

Did Mother Attend Family Planning Clinic Prior to Conception? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown	Number of Previous Live Births: _____ <input type="checkbox"/> Unknown	Number of Previous Pregnancies: _____ <input type="checkbox"/> Unknown	Prenatal Care for this Pregnancy: <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown Date of First Visit: <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <small>Month Day Year</small> <input type="checkbox"/> Unknown	Was Prenatal Care Obtained in: <input type="checkbox"/> Public Sector <input type="checkbox"/> Private sector <input type="checkbox"/> Unknown
---	--	--	--	--

Rubella-Like Illness During Pregnancy: <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown If Yes, Month of Pregnancy: _____ <input type="checkbox"/> Unknown	Was Rubella Diagnosed by a Physician at Time of Illness? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown If not MD, by Whom? _____	Was Rubella Serologically Confirmed at Time of Illness? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown
--	--	---

Location of Exposure: <i>Within</i> the United States <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown <i>Outside</i> the United States <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown If Yes, specify country; also specify county and city, if known: _____	If Location of Exposure is Unknown, did Mother Travel Outside the U.S. During the First Trimester of Pregnancy? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown If Yes, specify country; also specify county and city, if known: _____ Date of Travel: <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <small>Month Day Year</small> <input type="checkbox"/> Unknown	Source of Exposure: Was the Mother Directly Exposed to a Known Rubella Case? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown If Yes, specify relationship: _____ Date of Exposure: <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <small>Month Day Year</small> <input type="checkbox"/> Unknown
--	---	---

Number of Other Children Less than 18 Years of Age Living in Household During this Pregnancy: _____ **Were Any of the Children Immunized with Rubella Vaccine?**
 Yes No Unknown

Clinical Features of Maternal Illness: Rash..... <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown If Yes, Date of Onset: <table style="width:100%; text-align: center;"> <tr> <td style="border: 1px solid black; width: 20px; height: 20px;"></td> <td style="border: 1px solid black; width: 20px; height: 20px;"></td> <td style="border: 1px solid black; width: 20px; height: 20px;"></td> <td style="border: 1px solid black; width: 20px; height: 20px;"></td> <td style="border: 1px solid black; width: 20px; height: 20px;"></td> <td style="border: 1px solid black; width: 20px; height: 20px;"></td> <td style="border: 1px solid black; width: 20px; height: 20px;"></td> </tr> <tr> <td>Month</td> <td>Day</td> <td>Year</td> <td></td> <td></td> <td></td> <td></td> </tr> </table> Fever <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown Lymphadenopathy ... <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown Arthralgia/Arthritis: <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown Other (specify) _____								Month	Day	Year					Was Mother Immunized with Rubella Vaccine? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown If Yes, Date Vaccinated: <table style="width:100%; text-align: center;"> <tr> <td style="border: 1px solid black; width: 20px; height: 20px;"></td> <td style="border: 1px solid black; width: 20px; height: 20px;"></td> <td style="border: 1px solid black; width: 20px; height: 20px;"></td> <td style="border: 1px solid black; width: 20px; height: 20px;"></td> <td style="border: 1px solid black; width: 20px; height: 20px;"></td> <td style="border: 1px solid black; width: 20px; height: 20px;"></td> <td style="border: 1px solid black; width: 20px; height: 20px;"></td> </tr> <tr> <td>Month</td> <td>Day</td> <td>Year</td> <td></td> <td></td> <td></td> <td></td> </tr> </table> If Yes, Source of Information: <input type="checkbox"/> Physician <input type="checkbox"/> Mother Only <input type="checkbox"/> School <input type="checkbox"/> Other (specify) _____ <input type="checkbox"/> Public Sector <input type="checkbox"/> Private Sector <input type="checkbox"/> Unknown								Month	Day	Year					Did the Mother Have Serological Testing for Rubella Immunity Prior to Exposure? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown If Yes, Date: <table style="width:100%; text-align: center;"> <tr> <td style="border: 1px solid black; width: 20px; height: 20px;"></td> <td style="border: 1px solid black; width: 20px; height: 20px;"></td> <td style="border: 1px solid black; width: 20px; height: 20px;"></td> <td style="border: 1px solid black; width: 20px; height: 20px;"></td> <td style="border: 1px solid black; width: 20px; height: 20px;"></td> <td style="border: 1px solid black; width: 20px; height: 20px;"></td> <td style="border: 1px solid black; width: 20px; height: 20px;"></td> </tr> <tr> <td>Month</td> <td>Day</td> <td>Year</td> <td></td> <td></td> <td></td> <td></td> </tr> </table> If Yes, Interpretation of Test Results: <input type="checkbox"/> Susceptible <input type="checkbox"/> Immune <input type="checkbox"/> Unknown <small>(If more than one serologic test, include dates and results for each time tested.)</small>								Month	Day	Year				
Month	Day	Year																																										
Month	Day	Year																																										
Month	Day	Year																																										

IV LABORATORY

Specimens for Viral Study Yes No

Mother Infant (Check one)	Type Specimen	Date Collected	Laboratory	Specific Test Methods Used <small>(See below)*</small>	Test Results
<input type="checkbox"/> <input type="checkbox"/>	_____	/ /			
<input type="checkbox"/> <input type="checkbox"/>	_____	/ /			
<input type="checkbox"/> <input type="checkbox"/>	_____	/ /			
<input type="checkbox"/> <input type="checkbox"/>	_____	/ /			
<input type="checkbox"/> <input type="checkbox"/>	_____	/ /			
<input type="checkbox"/> <input type="checkbox"/>	_____	/ /			
<input type="checkbox"/> <input type="checkbox"/>	_____	/ /			
<input type="checkbox"/> <input type="checkbox"/>	_____	/ /			

V APPRAISAL

<input type="checkbox"/> Confirmed <input type="checkbox"/> Probable <input type="checkbox"/> Possible <input type="checkbox"/> Infection Only <input type="checkbox"/> Not CRS <input type="checkbox"/> Stillbirth <input type="checkbox"/> Unknown				<input type="checkbox"/> Indigenous to U.S. <input type="checkbox"/> Imported to U.S.	
Investigator's Name (print): _____			Telephone: _____		Date: _____
Physician Responsible for Child's Care: _____				Telephone: _____	
Source of Report: <input type="checkbox"/> Private MD <input type="checkbox"/> Death Record <input type="checkbox"/> Birth Record <input type="checkbox"/> Laboratory <input type="checkbox"/> Hospital <input type="checkbox"/> Other					

LAB TEST METHODS

a) Viral Cultures	d) ELISA	g) Passive Hemagglutination (PHIA)
b) RIA	e) Hemagglutination Inhibition	h) Other (Specify) _____
c) IFA	f) Latex Agglutination	

*If antibody testing was performed, specify which Rubella-specific immunoglobulin antibody (IgM or IgG) was used.

DEFINITIONS

Clinical Case Definition An illness of newborns resulting from rubella infection in utero and characterized by signs and symptoms in the following categories: A Cataracts/congenital glaucoma, congenital heart disease (most commonly patent ductus arteriosus, peripheral pulmonary artery stenosis), loss of hearing, pigmentary retinopathy. B Purpura, splenomegaly, jaundice, microcephaly, mental retardation, meningoencephalitis, radiolucent bone disease.	Case Classification Possible: A case with some compatible findings but not meeting the criteria for a probable case. Probable*: A case that is not laboratory-confirmed and that has any two complications listed in A above, or one complication A and one from B. Confirmed: A clinically compatible case that is laboratory-confirmed. Infection Only: A case with laboratory evidence of infection, but without any clinical symptoms or signs. <small>*In probable cases, either or both of the eye-related findings (cataracts and congenital glaucoma) count as a single complication.</small>
Clinical Description The presence of any defects or laboratory data consistent with congenital rubella infection (as reported by a health professional).	Imported to U.S. A case which has its source of exposure outside the United States.
Laboratory Criteria for Diagnosis <ul style="list-style-type: none"> • Isolation of rubella virus, or • Demonstration of rubella-specific IgM antibody, or • An infant's rubella antibody level that persists above and beyond that expected from passive transfer of maternal antibody (i.e., rubella titer that does not drop at the expected rate of twofold dilution per month). 	Indigenous to U.S. A case which cannot be proved to be imported.

POLIOVIRUS INFECTION OR POLIOMYELITIS CASE REPORT

FOR STATE/DCDC USE ONLY:

REPORT YEAR:

DATE CASE STATUS IS DETERMINED:

Patient name—last		first	middle initial	Date of birth	Age	Sex
Address—number, street			City	State	County	ZIP code
Telephone number Home () Work ()				County (where infected if different from address)		
RACE (check one) <input type="checkbox"/> African-American/Black <input type="checkbox"/> White <input type="checkbox"/> Native American <input type="checkbox"/> Asian/Pacific Islander <input type="checkbox"/> Other _____ If Asian/Pacific Islander, please check one: <input type="checkbox"/> Asian Indian <input type="checkbox"/> Cambodian <input type="checkbox"/> Chinese <input type="checkbox"/> Filipino <input type="checkbox"/> Guamanian <input type="checkbox"/> Hawaiian <input type="checkbox"/> Japanese <input type="checkbox"/> Korean <input type="checkbox"/> Laotian <input type="checkbox"/> Samoan <input type="checkbox"/> Vietnamese <input type="checkbox"/> Other _____				ETHNICITY (check one) <input type="checkbox"/> Hispanic/Latino <input type="checkbox"/> Non-Hispanic/Non-Latino		

CLINICAL DATA

Illness onset date (mm/dd/yy)	Weakness/paralysis onset date (mm/dd/yy)	Hospitalized <input type="checkbox"/> Yes <input type="checkbox"/> No	Attending physician or consultant physician	Telephone number ()
Admit date (mm/dd/yy)	Discharge date (mm/dd/yy)	Medical record number	Hospital name	Telephone number ()

Describe symptoms, signs (fever, gastrointestinal symptoms, meningeal irritation, myalgia; type—flaccid vs. plastic/rigid—distribution and progress of paralysis):

Paralysis/muscle weakness status 60 days after weakness/paralysis onset: None Died Residual weakness, describe below:

LABORATORY DATA (This section is continued on the reverse of this form.)

VIRUS ISOLATION (Throat washing, stool, rectal swab, CSF)

Type of Specimen	Date Collected	Result of the Test

Describe strain characterization of any poliovirus isolated (vaccine vs. wild type). **Do not wait for this result before sending form to Department of Health Services.**

SEROLOGIC DATA (Collection dates and results of acute and convalescent sera for polio CF and/or neutralization antibody test for all three (3) poliovirus types or for other possible agents)

Date Collected	Polio CF Titers			Polio Neut. Titers			Other Agents
	Type 1	Type 2	Type 3	Type 1	Type 2	Type 3	

CSF (Collection date(s), protein, white cell count and differential, glucose)

Date Collected	WBC Count and Differential	Protein	Glucose

LABORATORY DATA (Continued)

Electromyogram, nerve conduction study, other test, describe if any (specify date and findings):

Stool tested for *C. botulinum* organism/toxin, describe:

Serlim tested for *C. botulinum* toxin, describe:

Immunocompetence work-up (e.g., WBC, quantitative immunoglobulins, T and B cell quantitation, lymphocyte transmaton, HL-A), describe:

Immunodeficiency clinically evident: Yes No Unknown

Botulism culture/toxin assay: Date: _____ Findings: _____

EPIDEMIOLOGIC DATA

History of receipt of oral polio vaccine (OPV) ≤ 30 days before onset: Yes No Unknown

Full polio immunization history, specify date and vaccine type: _____

History of contact with person who received OPV ≤ 75 days before onset of case's symptoms: Yes No Unknown

If yes, describe relationship/contact of vaccinee to case, dates of immunization, and contact: _____

Dose number of OPV received by contact: First Second Third Fourth >Fifth

Foreign travel or foreign visitors in the 30-day period before onset: Yes No Unknown

If yes, describe in details (dates of contact, illness signs and symptoms, etc.): _____

Other cases of polio-like illness in the community or in contact with the case ≤ 30 days before onset: Yes No Unknown

If yes, describe in details (dates of contact, illness signs and symptoms, etc.): _____

REMARKS

Investigator name (print)	Date	Telephone number ()
Agency name		

CASE DEFINITIONS

Poliovirus infection, non-paralytic CASE DEFINITION 2010 - CSTE Position Statement Number: 09-ID-53
Case classification:
Confirmed: Any person without symptoms of paralytic poliomyelitis in whom a poliovirus isolate was identified in an appropriate clinical specimen, with confirmatory typing and sequencing performed by the CDC Poliovirus Laboratory, as needed.
**Note that this case definition applies only to poliovirus infections found in asymptomatic persons or those with mild, nonparalytic disease (e.g., those with a nonspecific febrile illness, diarrhea, or aseptic meningitis). Isolation of polioviruses from persons with acute paralytic poliomyelitis should continue to be reported as "paralytic poliomyelitis."*

Poliomyelitis, paralytic CASE DEFINITION 2010 - CSTE Position Statement Number: 09-ID-53
Case classification:
Probable: Acute onset of a flaccid paralysis of one or more limbs with decreased or absent tendon reflexes in the affected limbs, without other apparent cause, and without sensory or cognitive loss.
Confirmed: Acute onset of a flaccid paralysis of one or more limbs with decreased or absent tendon reflexes in the affected limbs, without other apparent cause, and without sensory or cognitive loss; AND in which the patient has a neurologic deficit 60 days after onset of initial symptoms; OR has died; OR has unknown follow-up status.



VARICELLA (CHICKEN POX) HOSPITALIZED CASE REPORT

California Dept. of Public Health
Immunization Branch
850 Marina Bay Parkway
Building P, 2nd Floor, MS 7313
Richmond, CA 94804-6403

PATIENT DEMOGRAPHICS

Patient's name (last, first, middle initial)		DOB (month/day/year) / /		Age (enter age and check one) <input type="checkbox"/> Days <input type="checkbox"/> Weeks <input type="checkbox"/> Months <input type="checkbox"/> Years	
Address (number and street)		City/town	State	Zip code	County
Country of birth <input type="checkbox"/> USA <input type="checkbox"/> Other Specify _____ <input type="checkbox"/> Unknown		Date of arrival to USA / /		Gender <input type="checkbox"/> F <input type="checkbox"/> M <input type="checkbox"/> FTM <input type="checkbox"/> MTF <input type="checkbox"/> Other <input type="checkbox"/> Unknown	
Race (check all that apply)					
<input type="checkbox"/> Black/African American		<input type="checkbox"/> Asian (please specify)		<input type="checkbox"/> Pacific Islander (please specify)	
<input type="checkbox"/> Native American/Alaskan		<input type="checkbox"/> Asian Indian <input type="checkbox"/> Hmong <input type="checkbox"/> Thai		<input type="checkbox"/> Native Hawaiian	
<input type="checkbox"/> White		<input type="checkbox"/> Cambodian <input type="checkbox"/> Japanese <input type="checkbox"/> Vietnamese		<input type="checkbox"/> Guamanian	
<input type="checkbox"/> Unknown		<input type="checkbox"/> Chinese <input type="checkbox"/> Korean <input type="checkbox"/> Other Asian _____		<input type="checkbox"/> Samoan	
<input type="checkbox"/> Other _____		<input type="checkbox"/> Filipino <input type="checkbox"/> Laotian		<input type="checkbox"/> Other Pacific Islander _____	
Ethnicity (check one) <input type="checkbox"/> Hispanic/Latino <input type="checkbox"/> Non-Hispanic/Non-Latino <input type="checkbox"/> Unknown					
Occupation		Occupation Setting (check all that apply) <input type="checkbox"/> Health Care <input type="checkbox"/> Day Care <input type="checkbox"/> School <input type="checkbox"/> Correctional Facility <input type="checkbox"/> Other, specify: _____			

COMMON LHD TRACKING DATA

CMRID number		IZB case ID number			
Date reported to county / /	Date investigation started / /	Person/clinician reporting case		Reporter telephone ()	
Case investigator completing form		Investigator telephone ()		Investigator jurisdiction	

CLINICAL INFO: SIGNS AND SYMPTOMS

Physician diagnosis (select only one) <input type="checkbox"/> Chickenpox <input type="checkbox"/> Shingles (If shingles, not reportable) <input type="checkbox"/> Unknown		Maculo-papulovesicular rash <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown		Rash onset / /		Diagnosis date / /	
Spread of rash <input type="checkbox"/> Generalized rash <input type="checkbox"/> Localized rash (1-3 dermatomes) <input type="checkbox"/> Unknown		Total number of lesions <input type="checkbox"/> Unknown <input type="checkbox"/> Mild (<50 lesions) <input type="checkbox"/> Mild/moderate (50-249 lesions) <input type="checkbox"/> Moderate (250-499 lesions) <input type="checkbox"/> Severe (≥500 lesions or complications)		Rash characteristics (check all that apply) <input type="checkbox"/> Itchy <input type="checkbox"/> Painful <input type="checkbox"/> Tingling or numbness <input type="checkbox"/> Lesions present in different stages (vesicles, crusted lesions) Fever>100.4 <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown			
Location		Duration of rash					
		Other symptoms <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown Describe: _____					

DOES CASE MEET CSTE CLINICAL CRITERIA? Yes No Unknown

HOSPITALIZATION/COMPLICATIONS AND OTHER SYMPTOMS

Hospitalized (≥24 hours) <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown		Total nights hospitalized		Reasons for hospitalization (check all that apply) <input type="checkbox"/> Unknown		
Admission date / /		Discharge date / /		<input type="checkbox"/> Severity <input type="checkbox"/> Varicella-related complication <input type="checkbox"/> Administration of IV treatment		
Name of hospital		<input type="checkbox"/> Isolation <input type="checkbox"/> Non-varicella hospitalization <input type="checkbox"/> Other, specify _____			<input type="checkbox"/> Observation with coincident varicella	
Complications <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown		Encephalitis <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown		Skin/soft tissue infection <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown		Cerebellitis/Ataxia <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown
Pneumonia <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown		Meningitis <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown		Hemorrhagic condition <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown		Dehydration/hypovolemia <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown
Specify other complications		Secondary bacterial infection? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown If yes, specify _____				Death (If yes, complete worksheet) Date <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown / /

VACCINATION / MEDICAL HISTORY

Received one or more doses of varicella containing vaccine <input type="checkbox"/> Yes, self-reported <input type="checkbox"/> No <input type="checkbox"/> Yes, documented <input type="checkbox"/> Unknown		Number of doses prior to illness onset		Dates of vaccination Dose 1 / / <input type="checkbox"/> Date Unknown		Dose 2 / / <input type="checkbox"/> Date Unknown		Dose 3 / / <input type="checkbox"/> Date Unknown		Dose 4 / / <input type="checkbox"/> Date Unknown	
Reason for not being vaccinated (check all that apply)		Prior MD diagnosis of varicella <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown		Prior MD diagnosis of shingles <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown		Comments-specify co-morbidities, reason for immunocompromised status (list medications or conditions) and type of antiviral treatment					
<input type="checkbox"/> Personal Beliefs Exemption (PBE)		Immunocompromised (If yes, explain in comments) <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown		Pregnant <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown							
<input type="checkbox"/> Permanent Medical Exemption (PME)		If yes, estimated delivery date / /		Co-morbidities (If yes, specify in comments) <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown							
<input type="checkbox"/> Temporary Medical Exemption		Antivirals taken (If yes, specify in comments) <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown									
<input type="checkbox"/> Lab confirmation of previous disease											
<input type="checkbox"/> MD diagnosis of previous disease											
<input type="checkbox"/> Under age for vaccination											
<input type="checkbox"/> Delay in starting series or between doses											
<input type="checkbox"/> Unknown											
<input type="checkbox"/> Other											



VARICELLA (CHICKEN POX) HOSPITALIZED CASE REPORT

California Dept. of Public Health
 Immunization Branch
 850 Marina Bay Parkway
 Building P, 2nd Floor, MS 7313
 Richmond, CA 94804-6403

LABORATORY INFO

Name of diagnostic laboratory		CASE LAB CONFIRMED (FOR STATE USE ONLY) <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown			
DFA performed: <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown	Source	DFA specimen date / /	DFA result <input type="checkbox"/> P <input type="checkbox"/> N <input type="checkbox"/> I <input type="checkbox"/> E <input type="checkbox"/> X <input type="checkbox"/> U	LAB RESULT CODES P = Positive N = Negative (antibody not detected) I = Indeterminate E = Pending X = Not done U = Unknown	
PCR performed <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown	Source	PCR specimen date / /	PCR result <input type="checkbox"/> P <input type="checkbox"/> N <input type="checkbox"/> I <input type="checkbox"/> E <input type="checkbox"/> X <input type="checkbox"/> U		
Virus isolation performed <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown	Source	Virus specimen date / /	Virus isolated <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown		
Genotyping performed <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown		Date sent / /	Genotype		
Serology performed <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown	Specimen date	Titer result	Test reference index	Result interpretation	
IgM	/ /			<input type="checkbox"/> P <input type="checkbox"/> N <input type="checkbox"/> I <input type="checkbox"/> E <input type="checkbox"/> X <input type="checkbox"/> U	
IgG (acute)	/ /			<input type="checkbox"/> P <input type="checkbox"/> N <input type="checkbox"/> I <input type="checkbox"/> E <input type="checkbox"/> X <input type="checkbox"/> U	
IgG (convalescent)	/ /			<input type="checkbox"/> P <input type="checkbox"/> N <input type="checkbox"/> I <input type="checkbox"/> E <input type="checkbox"/> X <input type="checkbox"/> U	
Other lab tests performed <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown	Source	Other lab test date / /	Specify lab tests	Other lab test results	
	Source	Other lab test date / /	Specify lab tests	Other lab test results	

EPIDEMIOLOGIC INFO: Please report all contacts meeting the probable or confirmed case definitions on a separate Case Report Form.

Close contact with person(s) with rash OR shingles (zoster) 10-21 days before rash onset Yes No Unknown

Epi-linked to a lab-confirmed or probable case Yes No Unknown If yes, Name or Case ID: _____ Outbreak related Yes No Unknown Outbreak name or location _____

SPREAD SETTING (check all that apply)

Day care Hospital Ward Home Military Unknown
 School Hospital ER Work Correctional facility Other _____
 Doctor's office Outpatient hospital clinic College Church

Number of susceptible contacts _____ Close contacts who have rash 10-21 days after exposure to case Yes No Unknown

	Name	Rash onset	Pregnant (Select one)	Estimated date of delivery	Age (years)	Same household (Select one)	Prophylaxis
1		/ /	Y N U	/ /		Y N U	<input type="checkbox"/> VariZIG <input type="checkbox"/> Vaccination <input type="checkbox"/> None
2		/ /	Y N U	/ /		Y N U	<input type="checkbox"/> VariZIG <input type="checkbox"/> Vaccination <input type="checkbox"/> None
3		/ /	Y N U	/ /		Y N U	<input type="checkbox"/> VariZIG <input type="checkbox"/> Vaccination <input type="checkbox"/> None

Please list other contacts on a separate sheet or use the contact tracing worksheet.

CASE CLASSIFICATION (FOR LHD USE)

Confirmed Probable Not a case Unknown

CASE CLASSIFICATION (FOR STATE USE ONLY)

Confirmed Probable Not a case Unknown

VARICELLA (chickenpox) 2010 CASE DEFINITION

CSTE Position Statement Number: 09-ID-68

Clinical Case Definition: An illness with acute onset of diffuse (generalized) maculo-papulovesicular rash without other apparent cause.

Case Classification:

Probable: An Acute illness with diffuse (generalized) maculo-papulovesicular rash, AND lack of laboratory confirmation, AND lack of epidemiologic linkage to another probable or confirmed case.

Confirmed: An acute illness with diffuse (generalized) maculo-papulovesicular rash, AND epidemiologic linkage to another probable or confirmed case, OR

Laboratory confirmation (**criteria for diagnosis**) by any of the following:

- Isolation of varicella virus from a clinical specimen, OR
- Varicella antigen detected by direct fluorescent antibody test, OR
- Varicella-specific nucleic acid detected by polymerase chain reaction (PCR), OR
- Significant rise in serum anti-varicella immunoglobulin G (IgG) antibody level by any standard serologic assay.



PERINATAL HEPATITIS B CASE REPORT

Mail to: California Department of Public Health
 Immunization Branch
 850 Marina Bay Parkway
 Building P, 2nd Floor, MS 7313
 Richmond, CA 94804-6403
 OR Fax to: (510) 620-3949

This form is to be used for infants aged 1-24 months found to be infected with hepatitis B virus

CASE IDENTIFICATION AND DEMOGRAPHICS

PATIENT'S NAME—Last		First		Middle initial	PHONE ()
STREET ADDRESS		CITY	STATE	ZIP	COUNTY
DOB (month/day/year) / /	AGE (enter age and check one) <input type="checkbox"/> Days <input type="checkbox"/> Weeks <input type="checkbox"/> Months <input type="checkbox"/> Years		SEX <input type="checkbox"/> M <input type="checkbox"/> F	COUNTRY OF BIRTH <input type="checkbox"/> USA <input type="checkbox"/> OTHER: _____	DATE OF REPORT / /
ETHNICITY (check one) <input type="checkbox"/> Hispanic/Latino <input type="checkbox"/> Non-Hispanic/Non-Latino <input type="checkbox"/> Unknown	RACE (check all that apply) <input type="checkbox"/> Black/African-American <input type="checkbox"/> Asian: Please specify: _____ <input type="checkbox"/> Native American/Alaskan Native <input type="checkbox"/> Asian Indian <input type="checkbox"/> Hmong <input type="checkbox"/> Thai <input type="checkbox"/> White <input type="checkbox"/> Cambodian <input type="checkbox"/> Japanese <input type="checkbox"/> Vietnamese <input type="checkbox"/> Pacific Islander: Please specify: _____ <input type="checkbox"/> Unknown <input type="checkbox"/> Chinese <input type="checkbox"/> Korean <input type="checkbox"/> Other Asian: _____ <input type="checkbox"/> Other: _____ <input type="checkbox"/> Filipino <input type="checkbox"/> Laotian <input type="checkbox"/> Samoan <input type="checkbox"/> Other Pacific Islander: _____				
REASONS FOR TESTING (check all that apply) <input type="checkbox"/> Symptoms of acute hepatitis <input type="checkbox"/> Evaluation of liver enzymes <input type="checkbox"/> Postvaccination serologic testing <input type="checkbox"/> Other: _____			WAS INFANT ENROLLED IN CA PHPP? (If 'Yes' enter ID below) <input type="checkbox"/> Yes <input type="checkbox"/> No: Why not enrolled? : _____ <input type="checkbox"/> Unknown		
PHYSICIAN NAME (name, facility)		PHYSICIAN PHONE ()		CMR ID	PHPP ID

CLINICAL AND DIAGNOSTIC DATA

SYMPTOMATIC? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown	SYMPTOMS (check all) <input type="checkbox"/> Jaundice <input type="checkbox"/> Diarrhea <input type="checkbox"/> Dark urine <input type="checkbox"/> Anorexia <input type="checkbox"/> Other: _____	ONSET OF SYMPTOMS / /	HOSPITALIZED? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unk	DIED OF HEPATITIS? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unk
		DIAGNOSIS DATE (test date) / /	ADMIT DATE / /	DATE OF DEATH / /

INFANT'S HEPATITIS B DIAGNOSTIC TESTS (required)					MOTHER'S INFORMATION					
	Positive	Negative	Unk	Month/Day/Year	MOTHER'S ETHNICITY <input type="checkbox"/> Hispanic/Latino <input type="checkbox"/> Non-Hispanic/Non-Latino <input type="checkbox"/> Unknown			MOTHER'S RACE (please specify) <input type="checkbox"/> Asian: _____ <input type="checkbox"/> Black/African-American <input type="checkbox"/> Native American/Alaskan Native <input type="checkbox"/> Pacific Islander: _____ <input type="checkbox"/> White <input type="checkbox"/> Unknown <input type="checkbox"/> Other: _____		
HBsAg	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	___/___/___						
anti-HBs	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	___/___/___						
anti-HBc total	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	___/___/___						
anti-HBc IgM	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	___/___/___						
HBeAg	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	___/___/___						
Anti-HBe	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	___/___/___						
Other	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	___/___/___						

INFANT'S LIVER ENZYME LEVELS AT DIAGNOSIS Month/Day/Year				MOTHER'S COUNTRY OF BIRTH <input type="checkbox"/> USA <input type="checkbox"/> OTHER: _____			
ALT [SGPT] Result _____	Upper limit normal _____	___/___/___		WAS MOTHER CONFIRMED HBsAg POSITIVE PRIOR TO OR AT DELIVERY? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unk			
AST [SGOT] Result _____	Upper limit normal _____	___/___/___		IF 'No', WAS MOTHER CONFIRMED HBsAg POSITIVE AFTER DELIVERY? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unk			
Bilirubin _____		___/___/___					

INFANT'S HEPATITIS B VACCINE HISTORY					MOTHER'S HEPATITIS B DIAGNOSTIC TESTS				
Dose received	Age in hours if <24	Month/Day/Year	Date unk		Positive	Negative	Unk	MM/DD/YYYY	
<input type="checkbox"/> HBIG	_____	___/___/___	<input type="checkbox"/>		HBsAg	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	___/___/___
<input type="checkbox"/> Dose #1	_____	___/___/___	<input type="checkbox"/>		HBeAg	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	___/___/___
<input type="checkbox"/> Dose #2	_____	___/___/___	<input type="checkbox"/>		anti-HBe	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	___/___/___
<input type="checkbox"/> Dose #3	_____	___/___/___	<input type="checkbox"/>		Other	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	___/___/___
<input type="checkbox"/> Dose #4	_____	___/___/___	<input type="checkbox"/>		HBV DNA	_____	_____	_____	___/___/___
<input type="checkbox"/> None	<input type="checkbox"/> Unknown								

PERINATAL HEPATITIS B INFORMATION*					DID MOTHER RECEIVE ANTIVIRAL TREATMENT (e.g. lamivudine) OR HBIG DURING PREGNANCY? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unk				
<p>Case definition: HBsAg positivity in any infant aged >1-24 months who was born in the United States or in U.S. territories to an HBsAg-positive mother</p> <p>Postexposure prophylaxis: All infants born to HBsAg-positive women should receive single-antigen hepatitis B vaccine and HBIG ≤12 hours of birth and complete the vaccine series according to the recommended schedule with the final dose administered after age 24 weeks.</p> <p>Postvaccination serologic testing: Testing for anti-HBs and HBsAg should be performed after completion of the vaccine series (or 3rd dose), at age 9—18 months.</p>					NOTES				

*See the Hepatitis B Quicksheet for additional information

OPTIONAL HOUSEHOLD MANAGEMENT/FOLLOW-UP

Name	Age	Gender	Relationship to case	Hepatitis B status			CA PHPP ID (if applicable)
				Immune (anti-HBs positive)	Infected (HBsAg positive)	Unknown	
				<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
				<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
				<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
				<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
				<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
				<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
				<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
				<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
				<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
				<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

NOTES



Perinatal Hepatitis B Prevention Program

In-State Case Transfer Form

This form is for case transfers within California.

Please include all labs, progress notes, and vaccination records with this transfer form.

County of Origin Information: _____
Name of County

Name of Coordinator _____

E-mail _____ Phone (_____) _____

Fax (_____) _____

Name of Mother _____ Name of Infant _____

Mother's Address/Contact information _____

Date Transfer was Sent/Attempted _____ / _____ / _____

Original Case ID Number _____
co mm yy

Receiving County Information: _____
Name of County

Name of Coordinator _____

E-mail _____ Phone (_____) _____

Fax (_____) _____

Date transfer was Received _____ / _____ / _____

New Case Transfer ID number _____
co mm yy

The receiving county HAS HAS NOT confirmed receipt of this transfer

Instructions:

- This form is for case transfers within the state.
- Both counties (County of Transfer and County of Origin) should keep a copy of this transfer form in their respective records.
- For County of Origin - Send completed form to Receiving County with all available information.
- For Receiving County - Notify County of Origin of receipt. When submitting the case management form to CDPH, list County of Origin, Transfer Date, and previous ID in the appropriate fields.



Perinatal Hepatitis B Prevention Program

Out-of-State Case Transfer Form

This form is for case transfers out of California.

Please include all labs, progress notes, and vaccination records with this transfer form.

County of Origin Information: _____
Name of County

Name of Coordinator _____

E-mail _____ Phone (_____) _____

Fax (_____) _____

Name of Mother _____ Name of Infant _____

Date Transfer was Sent _____ / _____ / _____

California Case ID Number _____
co mm yy

State of Transfer Information: _____
Name of State

Name of Coordinator _____

E-mail _____ Phone (_____) _____

Fax (_____) _____

Date transfer was received _____ / _____ / _____

Mother's Address/Contact information _____

Instructions:

- This form is for case transfers out of California.
- The County of Origin should keep a copy of this transfer form in their record.
- Send completed form to the state Perinatal Hepatitis B Prevention Program.

California Perinatal Hepatitis B Prevention Program

Mail to: Perinatal Hepatitis B Prevention
 Immunization Branch
 California Department of Public Health
 850 Marina Bay Parkway
 Building P, 2nd Floor
 Richmond, CA 94804

OR Fax to: (510) 620-3949

Case/Household Identification No.

____ - ____ - ____
County mm yy

Pregnant HBsAg+ MOTHER

- New Report Update False Positive Final Report/Closed
- Transfer (specify TO and FROM below) **For Out of State Transfers, fax to State PHPP ASAP**

To: (county/state) _____ From: (county/state) _____ Date: _____

If this case transferred from another county, what was that county's ID Number? ____ - ____ - ____

1. County: _____ 2. Date County initiated report ____/____/____
mm dd yyyy 3. SSN ____ - ____ - ____
if available

4. Name: _____
Last First MI

5. Mother's date of birth ____/____/____ 6. Mother's age when screened _____ 7. EDD ____/____/____
mm dd yyyy mm dd yyyy

8. City _____ 9. Zip _____

10. Pregnancy Outcome Live Birth(s), number: _____ Miscarriage/Abortion
 Fetal Death(s), number: _____ Unknown

If miscarriage/abortion is selected, then form is complete. Send to CDPH.

11. Is this the first case/household management report submitted to CA Perinatal Hep. B Prog. on this mother?

Yes No (include previous ID number: ____ - ____ - ____ - ____) Unknown

12. Source of HBsAg+ report (check all that apply)

Laboratory Prenatal care provider Delivery hospital Unknown Other (Specify): _____

13. Is Mom a known Chronic Hepatitis B Carrier?

Yes No Unknown

14. Is mom currently taking anti-viral medication for Hepatitis B?

Yes No Unknown

15. Diagnostic tests (If repeat tests were done on different dates, attach additional pages and complete tests section only)

	Positive	Negative	Unknown	Date of test	Comments
a. HBsAg	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	____/____/____	_____
b. anti-HBc	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	____/____/____	_____
c. HBeAg	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	____/____/____	_____
d. anti-HBe	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	____/____/____	_____
e. Other: _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	____/____/____	_____
f. HBV DNA (describe results) _____				____/____/____	_____

16a. Planned delivery hospital?

Name: _____

City: _____

16b. Prenatal Care Provider:

MD Name: _____

Clinic Name: _____

City: _____ Phone: _____

Mother's MRN: _____

17. Country of mother's birth U.S.A. Other, Specify: _____ Unknown

18a. Race: (Check all that apply)

- White
 Black
 Amer. Indian/ Alaskan Native
 Other/Unspecified

Asian (check all that apply)

- Chinese
 Japanese
 Korean
 Filipino
 Asian Indian
 Cambodian (non-Hmong)

- Thai
 Laotian (non-Hmong)
 Vietnamese (non-Hmong)
 Hmong
 Mien
 Other Asian: _____

Pacific Islander (check all that apply)

- Guamanian
 Samoan
 Native Hawaiian
 Tongan
 Other Pacific Islander: _____

18b. Ethnicity:

- Hispanic
 Non-Hispanic
 Unknown

19. Initial submit date: ____/____/____
mm dd yyyy

20. Close date: ____/____/____
mm dd yyyy

Person completing form: _____

Date: _____

Agency: _____

Phone: _____

California Perinatal Hepatitis B Prevention Program

Mail to: Perinatal Hepatitis B Prevention Program
 Immunization Branch
 California Department of Public Health
 850 Marina Bay Parkway
 Building P, 2nd Floor
 Richmond, CA 94804

OR Fax to: (510) 620-3949

Case/Household Identification No. _ _ - _ - _ - _

Infant(s)

New Report Update False Positive Closed

Transfer (specify TO and FROM below)

To: (county/state) _____ From: (county/state) _____ Date: _____

If this case transferred from another county, what was that county's ID Number? _ _ - _ - _ - _

Birth Information:

3. Source of payment for delivery? (Check all that apply)

- 1 Medi-Cal 4 Self-pay
- 2 Other/Govt. 3rd party payer 5 Low income: _____
- 3 Private 3rd party payer 9 Other/Unk: _____

4. Delivery hospital:

Name: _____

5. Pediatric Care Provider:

Name: _____

Clinic Name: _____

City: _____ Phone: _____

Infant's MRN: _____ Case ID: _____

City: _____

Infant Information:

Infant # ____ If only one live infant, enter "1". If two or more live infants, attach additional page for each infant, assign the same case/household ID number on this form, number each infant accordingly (1, 2, 3 etc.) and complete the infant section only.

6. **Name:** _____
Last First MI

7a. **Birth date:** ____/____/____
mm dd yyyy

8. **Sex:** 1 Male 2 Female

7b. **Time of Birth (military):** ____:____ (hh:mm)

Immunization Record:

9. **HBIG** a. Not given b. Given

c. **Date and time when given** ____/____/____, ____:____
mm dd yyyy (military, hh:mm)

d. **If date/time not available, age in hrs when given** _____

10. **Hep B Vac1** a. Not given b. Given

c. **Date and time when given** ____/____/____, ____:____
mm dd yyyy (military, hh:mm)

d. **If date/time not available, age in hrs when given** _____

11. **Hep B Vac2** a. **Date when given** ____/____/____
mm dd yyyy

b. **Type of vaccine (if known):** _____

12. **Hep B Vac3** a. **Date when given** ____/____/____
mm dd yyyy

b. **Type of vaccine (if known):** _____

13. **Hep B Vac4** a. **Date when given** ____/____/____
(If applicable) mm dd yyyy

b. **Type of vaccine (if known):** _____

Post-Vaccination Follow-up Serology Record:

14. a. **HBsAg test done?** 1 Yes 2 No 9 Unknown

If 'Yes': b. **Date done** ____/____/____
mm dd yyyy

c. **Result:** 1 Pos 2 Neg 9 Unknown

15. a. **Anti-HBs test done?** 1 Yes 2 No 9 Unknown

If 'Yes': b. **Date done** ____/____/____
mm dd yyyy

c. **Result:** 1 Pos 2 Neg 9 Unknown

16. Reasons PVST was not completed (select all that apply):

- Compliance problem with physician/hospital
- Funding problem (i.e, lack of insurance, incomplete reimbursement)*
- Social circumstances/Access to Care
- Parent declined PVST
- Parent concern over blood draw
- Other (specify): _____

**If a parent expresses concern regarding the cost of PVS testing, please contact CDPH PHPP and ask about the Quest Lab No-Cost Screening Contract*

THE FOLLOWING SHOULD BE SENT TO CDPH

PHPP IMMEDIATELY:

PEP Errors: If infant has PEP error, complete page 4 of this form and fax to CDPH ASAP.

Out-of-State Transfer: Complete Out-of-State Transfer Form and submit to CDPH immediately.

Infected Infants: If infant is found to be infected at post-vaccination serology, complete Perinatal Case Report form ([CDPH 8702 http://www.cdph.ca.gov/pubsforms/forms/CtrldForms/cdph8702.pdf](http://www.cdph.ca.gov/pubsforms/forms/CtrldForms/cdph8702.pdf)) and fax this page to CDPH ASAP.

(Please see following page for second immunization series and repeat post-serology record)

California Perinatal Hepatitis B Prevention Program

Case/Household Identification No. _____
County mm yy

Name: _____
Last First MI

Birth date: ____/____/____
mm dd yyyy

Second Series Immunization and Repeat Post-Vaccination Serology Record:

17. a. If 'Neg', did infant receive a 2nd series of vaccine?

1 Yes 2 No 9 Unknown

b. Hep B Vac1 ____/____/____
mm dd yyyy

c. Hep B Vac2 ____/____/____
mm dd yyyy

d. Hep B Vac3 ____/____/____
mm dd yyyy

18. a. Was HBsAg test done after 2nd series?

1 Yes 2 No 9 Unknown

b. Date done ____/____/____
mm dd yyyy

c. Result: 1 Pos 2 Neg 9 Unknown

19. a. Was Anti-HBs test done after 2nd series?

1 Yes 2 No 9 Unk

b. Date done ____/____/____
mm dd yyyy

c. Result: 1 Pos 2 Neg 9 Unknown

Lost to Follow-up (for mother and infant):

20a. When was the mother/infant lost to follow-up?

Before infant was born During vaccination series Before PVS testing completed

Date of last contact: ____/____/____ (approximate) Never contacted

20b. Check all reasons mother and infant were lost to follow up (check all that apply)

Infant could never be located due to incorrect contact information

Infant moved out of the state: (If box is checked, please complete the CDPH Out-of-State Transfer Form)

Date moved: ____/____/____

Infant moved out of the country:

Date moved: ____/____/____ Country: _____

Compliance problem with family (i.e, uncooperative, refused PEP)

Was case reported to Child Protective Services? (If yes, please notify CDPH immediately and submit a copy of the CPS report).

1 Yes 2 No 9 Unknown

Infant died – date of death: _____, time of death (if available) _____

cause of death: _____

Other (specify): _____

General Comments:

NOTE: If further comments are necessary, please attach a separate page with additional information

Person completing form: _____ Date: _____

Post-Exposure Prophylaxis (PEP) Errors

A PEP error has occurred when an infant born to an HBsAg positive mother does not receive HBIG and/or HBV vaccine at all OR within the recommended time frame (within 12 hours of birth). ***If a PEP error occurs, please complete the following form and fax to (510) 620-3949 within 5 business days***

New Report
 Update

County: _____ PPHP ID Number _____

MOTHER'S Name: _____

MOTHER'S date of birth _____

Last First MI

mm dd yyyy

INFANT'S Name: _____

INFANT'S date of birth Time of birth _____

Last First MI

mm dd yyyy (Military Time: hh:mm)

Sex: 1 Male 2 Female

Hospital Name: _____ Phone: _____ Fax: _____

HBIG Not given Given

Hep B Vac1 Not given Given

Date and time when given _____
mm dd yyyy (military, hh:mm)

Date and time when given _____
mm dd yyyy (military, hh:mm)

If date/time not available, age in hrs when given _____

If date/time not available, age in hrs when given _____

Reasons for error (check all that apply)

HBsAg testing

- Mother's status was not known at the time of admission
 - Hospital did not test mother
 - Hospital tested mother but the results were delayed
- Mother's HBsAg status was misinterpreted
 - By a clinician at the hospital
 - By the treating provider who provided incorrect information to the hospital
- Original lab result was not available in the hospital record
 - Mother's HBsAg result was communicated verbally to the hospital
 - Mother's HBsAg result was communicated in writing to the hospital
- Mother had multiple HBsAg tests and hospital only had documentation of a negative test
- Hospital did not assess mother's HBsAg status
- Other (if so, please specify) _____

PEP Availability

- Pharmacy was closed/delay in the pharmacy
- Pharmacy did not have HBIG in stock
- Pharmacy did not have HBV vaccine in stock

Compliance

- Parent refused PEP for infant
- Physician did not provide PEP to infant
- Parent did not present child to care for PEP (e.g. in the event of a home birth where the infant might receive PEP in an ED or other planned facility)

Patient Care


- Staff miscommunication or poor recordkeeping of administration/receipt of PEP
- Short-staffed; patient census high; could not provide PEP within time frame
- Change of shift

Infant Medical Reason

- Infant medical emergency
- Physician or other clinician refused to provide PEP to infant because of infant's medical condition

PLEASE SUBMIT ANY INFANT UPDATES AND POST-VACCINATION SEROLOGIC TESTING RESULTS USING FORM CDPH 8546

Please describe why the PEP error occurred in as much detail as possible. Attach any lab reports and relevant medical records available for this mother and infant.



NOTE: If further comments are necessary, please attach a separate page with additional information

California Perinatal Hepatitis B Prevention Program Confidential HBsAg+ Case/Household Management Report

Household Contacts

1. Case/Household Identification No. _____
County mm yy _____

2. All Household Contacts

- a. _____ Total number of household contacts identified (a = b+c+d+j+k)
- b. _____ Number already known to be chronically infected or immune due to prior infection of Hep B
- c. _____ Number previously immunized
- d. _____ Number seroscreened for Hep B markers (usually anti-HBc)
 - e. _____ Of those seroscreened, number age ≤ 5 years
 - f. _____ Of those seroscreened, number age ≥ 6 years
 - g. _____ Of those seroscreened, number found to be already infected or immune
 - h. _____ Of those seroscreened, number found to be susceptible (i.e. negative for Hep B markers)
 - i. _____ Of those found to be susceptible, number vaccinated
- j. _____ Number vaccinated without screening
- k. _____ Number lost to follow-up

3. Household Contacts Receiving Immunization (list in any order)

Please enter the codes in () into the spaces below.

	a.	b.	c.	d.	e.
	Name (optional)	Age: 0-5 yrs (1); 6-21 yrs (2); ≥22 yrs. (3)	Hep B Vac 1 given? Yes (1); No (2); Unk (9)	Hep B Vac 2 given? Yes (1); No (2); Unk (9)	Hep B Vac 3 given? Yes (1); No (2); Unk (9)
Contact 1					
Contact 2					
Contact 3					
Contact 4					
Contact 5					
Contact 6					

4. Lost to Follow-Up

If any of the household contacts listed above does not complete the 3-dose series, check all of the reasons that apply.

- a. Contact(s) located but later lost to follow-up
- b. Contact(s) found to be already infected or immune after series was started
- c. Contact(s) moved to another county within the state for follow-up and don't know whether vaccination series was completed or not
- d. Contact(s) moved out of the state
- e. Contact(s) moved out of the country
- f. Contact(s) died
- g. Compliance problem with family
- h. Other (specify): _____

Person completing form: _____

Date: _____

Agency: _____

Phone: _____

California Perinatal Hepatitis B Prevention Program

Confidential HBsAg+ Case/Household Management Report

Case/Household Identification No. _____
County mm yy

Optional worksheet (Do not send to State)

Name _____

Household address(es)/phone(s) _____

Translator needed? YES NO Mother's language _____

Staff person assigned to case/household _____ Delivery hospital _____

Provider type _____ Provider type _____

Physician name _____ Physician name _____

Clinic address(es) _____ Clinic address(es) _____

Phone(s) _____ Phone(s) _____

Infant(s) Dates Doses Due/Given=

Due
Given

Name(s)	Date of Birth	HBIG/Vac #1	Vac #2	Vac #3	Vac 4	PVS*
1.						
2.						

*Post Vaccination Serology Testing

Household Contacts Dates Doses Due/Given=

Due
Given

Name(s)	DOB	Sex	Date Referred	Serology Results	Vac #1	Vac #2	Vac #3	Notes
1.								
2.								
3.								
4.								
5.								
6.								

Please describe why the PEP error occurred in as much detail as possible. Attach any lab reports and relevant medical records available for this mother and infant.



NOTE: If further comments are necessary, please attach a separate page with additional information

ATTACHMENT D.8

Design Specifications for the ORCHID Interface

System Requirements and Specifications for the Interface with the County's ORCHID system to be finalized as described in Section 6 (Agreement Regarding Interface with County's ORCHID System) of Amendment Number 11, dated as of _____, 2018, to County Contract No. PH-001629. For the avoidance of doubt, once delivered under the Statement of Work, the Interface with the County's ORCHID system is available for use by all Users.

1.0 ORCHID Interface Requirements

1.1 *Division of HIV and STD Programs (DHSP)*

- See Attachment D.8.1

1.2 *Tuberculosis Control Program (TBCP)*

- See Attachment D.8.1

1.3 *Vaccine Preventable Disease Control (VPDC) Program – Epidemiology*

- ORCHID Patient Medical Record Number

1.4 *Vaccine Preventable Disease Control (VPDC) Program – Perinatal Hepatitis B*

- Pregnancy Status (when available)

ATTACHMENT D.8.1

ORCHID List of Data Fields

REPORT NAME	STD Case Report				
BUSINESS REQUIREMENT	State mandated report and is required for STD cooperative agreement grant from the CDC. The same fields are used for STD surveillance, partner services, and case management activities which are critical to STD control.				
DATA FIELDS (Required Column)	FIELD DEFINITION (Data Element)	Field Object (Values) <i>Refer to the STD Confidential Morbidity Report Form</i>	TABLE FROM WHICH DATA IS PULLED	SPECIFIC FIELD WITHIN TABLE FROM WHICH DATA IS PULLED	Data entry/ view location
Clinician who diagnosed STD case	Report done by		Demographics; Disease(s) Reported; Blood test info; Patient Rx - Meds & Doses and treatment date info		
Dept/Clinic	Dept/Clinic		Powerchart		Patient Information Demographic
Facility Name	Facility Name		Powerchart		Patient Information Demographic
Facility House Number	Address		Powerchart		Patient Information Demographic
Facility Street					
Facility City					
Facility State					
Facility Zip Code	City/State/Zip code		Powerchart		Patient Information Demographic
Facility Phone					
Facility Fax	Tel/Fax		Powerchart		Patient Information Demographic
Patient Last name	Patient Last Name		Powerchart		Patient Information Demographic
Patient First name	First name		Powerchart		Patient Information Demographic
Patient Middle Initial	MI		Powerchart		Patient Information Demographic
Medical Record number	Medical Record number		Powerchart		Patient Information Demographic
Birthdate	Birthdate		Powerchart		Patient Information Demographic
Patient House Number	Patient House Number		Powerchart		Patient Information Demographic
Patient Street	Patient Street				
Patient Apartment Number	Patient Apartment Number		Powerchart		Patient Information Demographic
Patient City	Patient City		Powerchart		Patient Information Demographic
Patient State	Patient State		Powerchart		Patient Information Demographic
Patient Zip Code	Patient Zip Code		Powerchart		Patient Information Demographic
Patient Home Phone	Patient Home Phone		Powerchart		Patient Information Demographic
Patient Work Phone	Patient Work Phone		Powerchart		Patient Information Demographic
Patient Cell Phone	Patient Cell Phone		Powerchart		Patient Information Demographic
Patient Social Security Number	Patient Social Security Number		DCP_ACTIVE_FORM (clinical_event) PowerForm	DCP_ACTIVE_FORM (clinical_event) PowerForm	DCP_ACTIVE_FORM (clinical_event) PowerForm
Patient Email Address	Email Address		Powerchart		Patient Information Demographic
Patient Pregnant?	Patient Pregnant?	No/Yes/Unk	DCP_ACTIVE_FORM (clinical_event) PowerForm		

Date of Last Menstrual Period	LMP	date	DCP_ACTIVE_FORM (clinical_event) PowerForm		
Partner Pregnant?	Partner Pregnant?	No/Yes/Unk	DCP_ACTIVE_FORM (clinical_event) PowerForm		
Current Gender:	Current Gender:Male/Female/Transgender (M-F)/Transgender (F-M)/Unknown/Other	Male/Female/Transgender (M-F)/Transgender (F-M)/Unknown/Other	DCP_ACTIVE_FORM (clinical_event) PowerForm		
Marital Status	Marital Status:Single/Married-Domestic Partner/Separated/Divorced/Widowed/Living with Partner	Code_Set 38 --If Living With Partner is Added Single/Married-Domestic Partner/Separated/Divorced/Widowed/Living with Partner	DCP_ACTIVE_FORM (clinical_event) PowerForm		
Race	Race	Code_Set 282	DCP_ACTIVE_FORM (clinical_event) PowerForm		
Ethnicity:	Ethnicity:Hispanic-Latino/Non-hispanic-Non Latino	Hispanic-Latino/Non-hispanic-Non Latino	DCP_ACTIVE_FORM (clinical_event) PowerForm		
Primary Language:	Primary Language: English/Spanish/Other	English/Spanish/Other	DCP_ACTIVE_FORM (clinical_event) PowerForm		
Gender of Sex Partner(s)	Gender of Sex Partner(s):Male/Female/Transgender (M-F)/Transgender (F-M)/Unknown/Other/Refused	Male/Female/Transgender (M-F)/Transgender (F-M)/Unknown/Other/Refused	DCP_ACTIVE_FORM (clinical_event) PowerForm		
Disease(s) being reported:	Disease(s) being reported: Chlamydia/Gonorrhea/Syphilis/PID/Chancroid	Chlamydia/Gonorrhea/Syphilis/PID/Chancroid	DCP_ACTIVE_FORM (clinical_event) PowerForm		
Chlamydia Site/specimen with positive result:	Site/specimen with positive result:Chlamydia:Urine/Cervix/Vagina/Urethra/Rectum/Pharyngeal/Other	Chlamydia:Urine/Cervix/Vagina/Urethra/Rectum/Pharyngeal/Other	DCP_ACTIVE_FORM (clinical_event) PowerForm		
Gonorrhea Site/specimen with positive result:	Site/specimen with positive result:Gonorrhea:Urine/Cervix/Vagina/Urethra/Rectum/Pharyngeal/Other	Gonorrhea:Urine/Cervix/Vagina/Urethra/Rectum/Pharyngeal/Other	DCP_ACTIVE_FORM (clinical_event) PowerForm		
Specimen Collection Date	Specimen Collection Date	date	Powerchart		Order
Treatment Date	Treatment Date	date	Powerchart		Order eMar
Allergic to:	Allergic to:Pencillin/Cephalosporins	Pencillin/Cephalosporins	Powerchart		Allergy
Medication(s) and dose: Not treated/ceftriaxone 250mg IM/Azithromycin 1g PO/Azithromycin 2g PO/Doxycycline 100mg BIDx7day/Cefixime 400mg PO/Other meds	Medication(s) and dose: Not treated/ceftriaxone 250mg IM/Azithromycin 1g PO/Azithromycin 2g PO/Doxycycline 100mg BIDx7day/Cefixime 400mg PO/Other meds		Powerchart		Order eMAR
Chlamydia/Gonorrhea Diagnosis:Asymptomatic/Symptomatic-uncomplicated/PID-due to gonorrhea or chlamydia/Eye infection/Disseminated gonorrhea/Lymphogranuloma venereum/Other	Chlamydia/Gonorrhea Diagnosis:Asymptomatic/Symptomatic-uncomplicated/PID-due to gonorrhea or chlamydia/Eye infection/Disseminated gonorrhea/Lymphogranuloma venereum/Other		Powerchart		Order Lab
Number partners (60 days):Number Treated	Number partners (60 days):Number Treated		DCP_ACTIVE_FORM (clinical_event) PowerForm		
Syphilis Stage:Primary/Secondary/Early Latent/Late Latent/Probable Congenital syphilis	Syphilis Stage:Primary/Secondary/Early Latent/Late Latent/Probable Congenital syphilis		Powerchart		Order Lab
Syphilis-signs & symptoms:None/Genital ulcer/rectal-perianal ulcer/Oral ulcer/Rash/Alopecia/Condyloma lata/Neurological symptoms/Other:Onset date	Syphilis-signs & symptoms:None/Genital ulcer/rectal-perianal ulcer/Oral ulcer/Rash/Alopecia/Condyloma lata/Neurological symptoms/Other:Onset date		Powerchart		Order Lab
Neurosyphilis?:Yes/No/Unknown	Neurosyphilis?:Yes/No/Unknown		Powerchart		Order Lab
Blood Test-collection date	Blood Test-collection date		Powerchart		Order Lab
RPR:Neg/Pos:Tier	RPR:Neg/Pos:Tier		Powerchart		Order Lab
VDRL: Neg/Pos:Tier	VDRL: Neg/Pos:Tier		Powerchart		Order Lab
FTA-ABS:Neg/Pos	FTA-ABS:Neg/Pos		Powerchart		Order Lab
TP-PA:Neg/Pos	TP-PA:Neg/Pos		Powerchart		Order Lab
EIA/CIA:Neg/Pos	EIA/CIA:Neg/Pos		Powerchart		Order Lab
Other test	Other test		Powerchart		Order Lab

CSF Collection date	CSF Collection date		Powerchart		Order Lab
CSF-VDRL:Neg/Pos:Teir	CSF-VDRL:Neg/Pos:Teir		Powerchart		Order Lab
CSF WBC:	CSF WBC:		Powerchart		Order Lab
CSF protein	CSF protein		Powerchart		Order Lab
Infants only:Live Birth/Still birth	Infants only:Live Birth/Still birth		DCP_ACTIVE_FORM (clinical_event) PowerForm		
Gestation	Gestation		DCP_ACTIVE_FORM (clinical_event) PowerForm		
Weight	Infant Weight		DCP_ACTIVE_FORM (clinical_event) PowerForm		
Long Bone x-rays consistent with congenital syphilis?: No/Yes/Unknown/Not done	Long Bone x-rays consistent with congenital syphilis?: No/Yes/Unknown/Not done		DCP_ACTIVE_FORM (clinical_event) PowerForm		
Infant's serum RPR tier 4x mothers? Yes/no	Infant's serum RPR tier 4x mothers? Yes/no		DCP_ACTIVE_FORM (clinical_event) PowerForm		
Mother Only: Syphilis Stage	Mother Only: Syphilis Stage		DCP_ACTIVE_FORM (clinical_event) PowerForm		
Serology (at delivery): RPR/VDRL:Tier	Serology (at delivery): RPR/VDRL:Tier		DCP_ACTIVE_FORM (clinical_event) PowerForm		
Partner Information: Numbers partners(last 12 months): number treated	Partner Information: Numbers partners(last 12 months): number treated		DCP_ACTIVE_FORM (clinical_event) PowerForm		
Patient Rx(medication,dose,date): Benzathine Penicillin G 2.4MU IM once/Benzathine Penicillin G 2.4MU IM once/Benzathine Penicillin G 2.4MU IM once/Doxycycline 100 bid x 14 d/Doxycycline 100 bid x 28d/Other meds/Not treated	Patient Rx(medication,dose,date):Benzathine Penicillin G 2.4MU IM once/Benzathine Penicillin G 2.4MU IM once/Doxycycline 100 bid x 14 d/Doxycycline 100 bid x 28d/Other meds/Not treated		DCP_ACTIVE_FORM (clinical_event) PowerForm		
Congenital Syphilis: provide mother's info:Last name/First name/MI/MRN/Birthdate	Congenital Syphilis: provide mother's info:Last name/First name/MI/MRN/Birthdate		DCP_ACTIVE_FORM (clinical_event) PowerForm		

REPORT NAME	HIV Case Report				
BUSINESS REQUIREMENT	To comply with State and Federal mandated a report is required for HIV surveillance grant funding from CDC. It is mission critical to ensure that HIV-positive individuals receive appropriate treatment and preventative care that includes partner services and treatment verification.				
Field Object (Values) Refer to the Adult HIV/AIDS Case Form					
DATA FIELDS (Required Column)	FIELD DEFINITION (Data Element)		TABLE FROM WHICH DATA IS PULLED	SPECIFIC FIELD WITHIN TABLE FROM WHICH DATA IS PULLED	Data entry/ view location
Physician Name	Physician Name		Powerchart		
Physician Phone Number	Physician Phone Number		Powerchart		
Did this report initiate a new case investigation		Values are as follows: - Yes - No - Unknown	DCP_ACTIVE_FORM (clinical_event) PowerForm		
Surveillance Method	Surveillance Method	Values are as follows: - Active - Passive - Followup - Reabtraction - Unknown - Yes - No - Unknown	DCP_ACTIVE_FORM (clinical_event) PowerForm		
Patient Last Name	Patient Last Name		Powerchart		Person Information Demographic
Patient Middle Name	Patient Middle Name		Powerchart		Person Information Demographic
Patient First Name	Patient First Name		Powerchart		Person Information Demographic
Patient Alias Last Name	Patient Alias Last Name		Powerchart		Person Information Demographic
Patient Alias Middle Name	Patient Alias Middle Name		Powerchart		Person Information Demographic
Patient Alias First Name	Patient Alias First Name		Powerchart		Person Information Demographic
Patient Address Type	Patient Address Type	Values are as follows: - Residential - Bad Address - Correctional Facility - Foster home - Homeless - Postal - Shelter - Temporary	DCP_ACTIVE_FORM (clinical_event) PowerForm	DCP_ACTIVE_FORM (clinical_event) PowerForm	DCP_ACTIVE_FORM (clinical_event) PowerForm
Patient House Number	Patient House Number				
Patient Street	Patient Street				
Patient City	Patient City		DCP_ACTIVE_FORM (clinical_event) PowerForm	DCP_ACTIVE_FORM (clinical_event) PowerForm	DCP_ACTIVE_FORM (clinical_event) PowerForm
Patient Apartment	Patient Apartment				
Patient County	Patient County		DCP_ACTIVE_FORM (clinical_event) PowerForm	DCP_ACTIVE_FORM (clinical_event) PowerForm	DCP_ACTIVE_FORM (clinical_event) PowerForm
Patient State	Patient State		DCP_ACTIVE_FORM (clinical_event) PowerForm	DCP_ACTIVE_FORM (clinical_event) PowerForm	DCP_ACTIVE_FORM (clinical_event) PowerForm
Patient Zip Code	Patient Zip Code		DCP_ACTIVE_FORM (clinical_event) PowerForm	DCP_ACTIVE_FORM (clinical_event) PowerForm	DCP_ACTIVE_FORM (clinical_event) PowerForm
Patient Home Phone	Patient Home Phone		DCP_ACTIVE_FORM (clinical_event) PowerForm	DCP_ACTIVE_FORM (clinical_event) PowerForm	DCP_ACTIVE_FORM (clinical_event) PowerForm
Patient Cell Phone	Patient Cell Phone				
Patient Social Security Number	Patient Social Security Number		DCP_ACTIVE_FORM (clinical_event) PowerForm	DCP_ACTIVE_FORM (clinical_event) PowerForm	DCP_ACTIVE_FORM (clinical_event) PowerForm
Patient Other ID Type #1	Patient Other ID Type #1		DCP_ACTIVE_FORM (clinical_event) PowerForm	DCP_ACTIVE_FORM (clinical_event) PowerForm	DCP_ACTIVE_FORM (clinical_event) PowerForm
Patient Other ID Type #1 Number	Patient Other ID Type #1 Number		DCP_ACTIVE_FORM (clinical_event) PowerForm	DCP_ACTIVE_FORM (clinical_event) PowerForm	DCP_ACTIVE_FORM (clinical_event) PowerForm
Patient Other ID Type #2	Patient Other ID Type #2		DCP_ACTIVE_FORM (clinical_event) PowerForm	DCP_ACTIVE_FORM (clinical_event) PowerForm	DCP_ACTIVE_FORM (clinical_event) PowerForm
Patient Other ID Type #2 Number	Patient Other ID Type #2 Number		DCP_ACTIVE_FORM (clinical_event) PowerForm	DCP_ACTIVE_FORM (clinical_event) PowerForm	DCP_ACTIVE_FORM (clinical_event) PowerForm
Gender (Sex)	Gender (Sex)	Code_Set 57	DCP_ACTIVE_FORM (clinical_event) PowerForm	DCP_ACTIVE_FORM (clinical_event) PowerForm	DCP_ACTIVE_FORM (clinical_event) PowerForm
Patient Country of Birth	Patient Country of Birth	Code_Set 15	DCP_ACTIVE_FORM (clinical_event) PowerForm	DCP_ACTIVE_FORM (clinical_event) PowerForm	DCP_ACTIVE_FORM (clinical_event) PowerForm
Patient Date of Birth	Patient Date of Birth		DCP_ACTIVE_FORM (clinical_event) PowerForm	DCP_ACTIVE_FORM (clinical_event) PowerForm	DCP_ACTIVE_FORM (clinical_event) PowerForm
Patient Alias Date of Birth	Patient Alias Date of Birth		DCP_ACTIVE_FORM (clinical_event) PowerForm	DCP_ACTIVE_FORM (clinical_event) PowerForm	DCP_ACTIVE_FORM (clinical_event) PowerForm
Patient Vital Status:	Patient Vital Status:	Values are as follows: - 1 - Alive - 2 - Dead	Powerchart		
Patient Date of Death:	Patient Date of Death:		Powerchart		
Patient State of Death:	Patient State of Death:	Values: CA, AZ,	Powerchart		
Patient HIV Status:	Patient HIV Status:	Values are as follows: - HIV - AIDS	Powerchart		
Current Gender Identity	Current Gender Identity	Current Gender:Male/Female/Transgender (M-F)/Transgender (F-M)/Unknown/Other	Powerchart		
Ethnic Group	Ethnic Group	Code_Set 27	Powerchart		
Race	Race	Code_Set 282	Powerchart		
Residence at Diagnosis: Address Type	Residence at Diagnosis: Address Type	Values are as follows: - Residence at HIV Diagnosis - Residence at AIDS Diagnosis	DCP_ACTIVE_FORM (clinical_event) PowerForm		
Patient Address at HIV Diagnosis: House Number	Patient Address at HIV Diagnosis: House Number				
Address of Residence at HIV Diagnosis: Street	Address of Residence at HIV Diagnosis: Street		DCP_ACTIVE_FORM (clinical_event) PowerForm		
Address of Residence at HIV Diagnosis: City	Address of Residence at HIV Diagnosis: City		DCP_ACTIVE_FORM (clinical_event) PowerForm		
Address of Residence at HIV Diagnosis: County	Address of Residence at HIV Diagnosis: County		DCP_ACTIVE_FORM (clinical_event) PowerForm		
Address of Residence at HIV Diagnosis: State	Address of Residence at HIV Diagnosis: State/Country		DCP_ACTIVE_FORM (clinical_event) PowerForm		
Address of Residence at HIV Diagnosis: Country	Address of Residence at HIV Diagnosis: Country				
Address of Residence at HIV Diagnosis: Zip Code	Address of Residence at HIV Diagnosis: Zip Code		DCP_ACTIVE_FORM (clinical_event) PowerForm		
Patient Address at AIDS Diagnosis: House Number	Patient Address at AIDS Diagnosis: House Number				
Address of Residence at AIDS Diagnosis: Street	Address of Residence at AIDS Diagnosis: Street		DCP_ACTIVE_FORM (clinical_event) PowerForm		

Address of Residence at AIDS Diagnosis: City	Address of Residence at AIDS Diagnosis: City		DCP_ACTIVE_FORM (clinical_event) PowerForm		
Address of Residence at AIDS Diagnosis: County	Address of Residence at AIDS Diagnosis: County		DCP_ACTIVE_FORM (clinical_event) PowerForm		
Address of Residence at AIDS Diagnosis: State	Address of Residence at AIDS Diagnosis: State				
Address of Residence at AIDS Diagnosis: Country	Address of Residence at AIDS Diagnosis: Country		DCP_ACTIVE_FORM (clinical_event) PowerForm		
Address of Residence at AIDS Diagnosis: Zip Code	Address of Residence at AIDS Diagnosis: Zip Code		DCP_ACTIVE_FORM (clinical_event) PowerForm		
Diagnosis Type	Diagnosis Type	Values are as follows: - HIV Diagnosis - AIDS Diagnosis	Powerchart		Diagnosis and Problem history
Facility Name	Facility Name		Powerchart		
Facility: Phone Number	Facility: Phone Number		Powerchart		
Facility: House Number	Facility: House Number				
Facility: Street Address	Facility: Street Address		Powerchart		
Facility: City	Facility: City		Powerchart		
Facility: County	Facility: County		Powerchart		
Facility: State/County	Facility: State/County		Powerchart		
Facility: Zip Code	Facility: Zip Code		Powerchart		
Sex with a male	Sex with a male	Values are as follows: - Yes - No - Unknown	DCP_ACTIVE_FORM (clinical_event) PowerForm		
Sex with a female	Sex with a female	Values are as follows: - Yes - No - Unknown	DCP_ACTIVE_FORM (clinical_event) PowerForm		
Injected non-prescription drugs	Injected non-prescription drugs	Values are as follows: - Yes - No - Unknown	DCP_ACTIVE_FORM (clinical_event) PowerForm		
Contact with intravenous/injection drug user (IDU)	Contact with intravenous/injection drug user (IDU)	Values are as follows: - Yes - No - Unknown	DCP_ACTIVE_FORM (clinical_event) PowerForm		
Contact with a bisexual male	Contact with a bisexual male	Values are as follows: - Yes - No - Unknown	DCP_ACTIVE_FORM (clinical_event) PowerForm		
Contact with a person with AIDS or documented HIV infection, risk not specified:	Contact with a person with AIDS or documented HIV infection, risk not specified:	Values are as follows: - Yes - No - Unknown	DCP_ACTIVE_FORM (clinical_event) PowerForm		
Contact with transplant recipient with documented HIV:	Contact with transplant recipient with documented HIV:	Values are as follows: - Yes - No - Unknown	DCP_ACTIVE_FORM (clinical_event) PowerForm		
Contact with transfusion recipient with documented HIV:	Contact with transfusion recipient with documented HIV:	Values are as follows: - Yes - No - Unknown	DCP_ACTIVE_FORM (clinical_event) PowerForm		
Received clotting factor for hemophilia/coagulation disorder	Received clotting factor for hemophilia/coagulation disorder	Values are as follows: - Yes - No - Unknown	DCP_ACTIVE_FORM (clinical_event) PowerForm		
Received transfusion of blood/blood components (non-clotting)	Received transfusion of blood/blood components (non-clotting)	Values are as follows: - Yes - No - Unknown	DCP_ACTIVE_FORM (clinical_event) PowerForm		
Perinatally infected (please enter in comments and local/optional fields section)	Perinatally infected (please enter in comments and local/optional fields section)	Values are as follows: - Yes - No - Unknown	DCP_ACTIVE_FORM (clinical_event) PowerForm		
Other documented risk (if yes, specify)	Other documented risk (if yes, specify)	Values are as follows: - Yes - No - Unknown	DCP_ACTIVE_FORM (clinical_event) PowerForm		
Other documented risk yes, specify	Other documented risk yes, specify		DCP_ACTIVE_FORM (clinical_event) PowerForm		
Test 1 (Non-Type Differentiating)	Test 1 (Non-Type Differentiating)	Values are as follows: - HIV-1 EIA - HIV-1/2 EIA - HIV-1/2 Ag/Ab - HIV-1 WB - HIV-1 IFA - HIV-2 EIA - HIV-2 WB - Other (specify test)	DCP_ACTIVE_FORM (clinical_event) PowerForm		
Test 1 (Non-Type Differentiating): Other specify test	Test 1 (Non-Type Differentiating): Other specify test		DCP_ACTIVE_FORM (clinical_event) PowerForm		
Test 1 (Non-Type Differentiating): Result:	Test 1 (Non-Type Differentiating): Result:	Values are as follows: - Positive/Reactive - Negative/Nonreactive - Indeterminate	DCP_ACTIVE_FORM (clinical_event) PowerForm		
Test 1 (Non-Type Differentiating): Manufacturer	Test 1 (Non-Type Differentiating): Manufacturer		DCP_ACTIVE_FORM (clinical_event) PowerForm		
Test 1 (Non-Type Differentiating): Rapid Test	Test 1 (Non-Type Differentiating): Rapid Test		DCP_ACTIVE_FORM (clinical_event) PowerForm		
Test 1 (Non-Type Differentiating): Collection Date	Test 1 (Non-Type Differentiating): Collection Date		DCP_ACTIVE_FORM (clinical_event) PowerForm		
Test 2 (Non-Type Differentiating)	Test 2 (Non-Type Differentiating)	Values are as follows: - HIV-1 EIA - HIV-1/2 EIA - HIV-1/2 Ag/Ab - HIV-1 WB - HIV-1 IFA - HIV-2 EIA - HIV-2 WB - Other (specify test)	DCP_ACTIVE_FORM (clinical_event) PowerForm		
Test 2 (Non-Type Differentiating): Other specify test	Test 2 (Non-Type Differentiating): Other specify test		DCP_ACTIVE_FORM (clinical_event) PowerForm		
Test 2 (Non-Type Differentiating): Result:	Test 2 (Non-Type Differentiating): Result:	Values are as follows: - Positive/Reactive - Negative/Nonreactive - Indeterminate	DCP_ACTIVE_FORM (clinical_event) PowerForm		

Test 2 (Non-Type Differentiating): Manufacturer	Test 2 (Non-Type Differentiating): Manufacturer		DCP_ACTIVE_FORM (clinical_event) PowerForm		
Test 2 (Non-Type Differentiating): Rapid Test	Test 2 (Non-Type Differentiating): Rapid Test		DCP_ACTIVE_FORM (clinical_event) PowerForm		
Test 2 (Non-Type Differentiating): Collection Date	Test 2 (Non-Type Differentiating): Collection Date		DCP_ACTIVE_FORM (clinical_event) PowerForm		
		Values are as follows: - HIV-1 EIA - HIV-1/2 EIA - HIV-1/2 Ag/Ab - HIV-1 WB - HIV-1 IFA - HIV-2 EIA - HIV-2 WB - Other (specify test)	DCP_ACTIVE_FORM (clinical_event) PowerForm		
Test 3 (Non-Type Differentiating)	Test 3 (Non-Type Differentiating)		DCP_ACTIVE_FORM (clinical_event) PowerForm		
Test 3 (Non-Type Differentiating): Other specify test	Test 3 (Non-Type Differentiating): Other specify test		DCP_ACTIVE_FORM (clinical_event) PowerForm		
		Values are as follows: - Positive/Reactive - Negative/Nonreactive - Indeterminate	DCP_ACTIVE_FORM (clinical_event) PowerForm		
Test 3 (Non-Type Differentiating): Result:	Test 3 (Non-Type Differentiating): Result:		DCP_ACTIVE_FORM (clinical_event) PowerForm		
Test 3 (Non-Type Differentiating): Manufacturer	Test 3 (Non-Type Differentiating): Manufacturer		DCP_ACTIVE_FORM (clinical_event) PowerForm		
Test 3 (Non-Type Differentiating): Rapid Test	Test 3 (Non-Type Differentiating): Rapid Test		DCP_ACTIVE_FORM (clinical_event) PowerForm		
Test 3 (Non-Type Differentiating): Collection Date	Test 3 (Non-Type Differentiating): Collection Date		DCP_ACTIVE_FORM (clinical_event) PowerForm		
Test: HIV-1/2 Differentiating (e.g. Multispot)	Test: HIV-1/2 Differentiating (e.g. Multispot)		DCP_ACTIVE_FORM (clinical_event) PowerForm		
		Values are as follows: - HIV -1 - HIV -2 - Both (undifferentiated) - Neither (negative)	DCP_ACTIVE_FORM (clinical_event) PowerForm		
Test: HIV-1/2 Differentiating (e.g. Multispot): Result	Test: HIV-1/2 Differentiating (e.g. Multispot): Result		DCP_ACTIVE_FORM (clinical_event) PowerForm		
Test: HIV-1/2 Differentiating (e.g. Multispot): Collection Date	Test: HIV-1/2 Differentiating (e.g. Multispot): Collection Date		DCP_ACTIVE_FORM (clinical_event) PowerForm		
		Values are as follows: - HIV-1 RNA/DNA NAAT (Qual) - HIV-1 P24 Antigen - HIV-1 Culture - HIV-2 RNA/DNA NAAT (Qual) - HIV -2 Culture	DCP_ACTIVE_FORM (clinical_event) PowerForm		
Test 1 HIV Detection Tests (Qualitative):	Test 1 HIV Detection Tests (Qualitative):		DCP_ACTIVE_FORM (clinical_event) PowerForm		
		Values are as follows: - Positive/Reactive - Negative/Nonreactive - Indeterminate	DCP_ACTIVE_FORM (clinical_event) PowerForm		
Test 1 HIV Detection Tests (Qualitative) : Result	Test 1 HIV Detection Tests (Qualitative) : Result		DCP_ACTIVE_FORM (clinical_event) PowerForm		
Test 1 HIV Detection Tests (Qualitative): Collection Date	Test 1 HIV Detection Tests (Qualitative): Collection Date		DCP_ACTIVE_FORM (clinical_event) PowerForm		
		Values are as follows: - HIV-1 RNA/DNA NAAT (Qual) - HIV-1 P24 Antigen - HIV-1 Culture - HIV-2 RNA/DNA NAAT (Qual) - HIV -2 Culture	DCP_ACTIVE_FORM (clinical_event) PowerForm		
Test 2 HIV Detection Tests (Qualitative):	Test 2 HIV Detection Tests (Qualitative):		DCP_ACTIVE_FORM (clinical_event) PowerForm		
		Values are as follows: - Positive/Reactive - Negative/Nonreactive - Indeterminate	DCP_ACTIVE_FORM (clinical_event) PowerForm		
Test 2 HIV Detection Tests (Qualitative): Result	Test 2 HIV Detection Tests (Qualitative): Result		DCP_ACTIVE_FORM (clinical_event) PowerForm		
Test 2 HIV Detection Tests (Qualitative): Collection Date	Test 2 HIV Detection Tests (Qualitative): Collection Date		DCP_ACTIVE_FORM (clinical_event) PowerForm		
		Values are as follows: - HIV-1 RNA/DNA NAAT (Quantitative Viral Load) - RT-PCR - bDNA - Other (specify test)	DCP_ACTIVE_FORM (clinical_event) PowerForm		
Test 1 HIV Detection Tests (Quantitative Viral Load):	Test 1 HIV Detection Tests (Quantitative Viral Load):		DCP_ACTIVE_FORM (clinical_event) PowerForm		
Test 1 HIV Detection Tests (Quantitative Viral Load): Other specify	Test 1 HIV Detection Tests (Quantitative Viral Load): Other specify		DCP_ACTIVE_FORM (clinical_event) PowerForm		
		Values are as follows: - Detectable - Undetectable	DCP_ACTIVE_FORM (clinical_event) PowerForm		
Test 1 HIV Detection Tests (Quantitative Viral Load) : Result	Test 1 HIV Detection Tests (Quantitative Viral Load) : Result		DCP_ACTIVE_FORM (clinical_event) PowerForm		
Test 1 HIV Detection Tests (Quantitative Viral Load) : Copies/ml	Test 1 HIV Detection Tests (Quantitative Viral Load) : Copies/ml		DCP_ACTIVE_FORM (clinical_event) PowerForm		
Test 1 HIV Detection Tests (Quantitative Viral Load) : Log	Test 1 HIV Detection Tests (Quantitative Viral Load) : Log		DCP_ACTIVE_FORM (clinical_event) PowerForm		
Test 1 HIV Detection Tests (Quantitative Viral Load): Collection Date	Test 1 HIV Detection Tests (Quantitative Viral Load): Collection Date		DCP_ACTIVE_FORM (clinical_event) PowerForm		
		Values are as follows: - HIV-1 RNA/DNA NAAT (Quantitative Viral Load) - RT-PCR - bDNA - Other (specify test)	DCP_ACTIVE_FORM (clinical_event) PowerForm		
Test 2 HIV Detection Tests (Quantitative Viral Load):	Test 2 HIV Detection Tests (Quantitative Viral Load):		DCP_ACTIVE_FORM (clinical_event) PowerForm		
Test 2 HIV Detection Tests (Quantitative Viral Load): Other specify	Test 2 HIV Detection Tests (Quantitative Viral Load): Other specify		DCP_ACTIVE_FORM (clinical_event) PowerForm		
		Values are as follows: - Detectable - Undetectable	DCP_ACTIVE_FORM (clinical_event) PowerForm		
Test 2 HIV Detection Tests (Quantitative Viral Load) : Result	Test 2 HIV Detection Tests (Quantitative Viral Load) : Result		DCP_ACTIVE_FORM (clinical_event) PowerForm		
Test 2 HIV Detection Tests (Quantitative Viral Load) : Copies/ml	Test 2 HIV Detection Tests (Quantitative Viral Load) : Copies/ml		DCP_ACTIVE_FORM (clinical_event) PowerForm		
Test 2 HIV Detection Tests (Quantitative Viral Load) : Log	Test 2 HIV Detection Tests (Quantitative Viral Load) : Log		DCP_ACTIVE_FORM (clinical_event) PowerForm		
Test 2 HIV Detection Tests (Quantitative Viral Load): Collection Date	Test 2 HIV Detection Tests (Quantitative Viral Load): Collection Date		DCP_ACTIVE_FORM (clinical_event) PowerForm		
CD4 at or closest to current diagnosis status: CD4 count	CD4 at or closest to current diagnosis status: CD4 count		DCP_ACTIVE_FORM (clinical_event) PowerForm		
CD4 at or closest to current diagnosis status: CD4 percentage	CD4 at or closest to current diagnosis status: CD4 percentage		DCP_ACTIVE_FORM (clinical_event) PowerForm		
CD4 at or closest to current diagnosis status: Collection Date	CD4 at or closest to current diagnosis status: Collection Date		DCP_ACTIVE_FORM (clinical_event) PowerForm		
First CD4 result < 200 cells/ul or < 14%: CD4 count	First CD4 result < 200 cells/ul or < 14%: CD4 count		DCP_ACTIVE_FORM (clinical_event) PowerForm		
First CD4 result < 200 cells/ul or < 14%: CD4 percentage:	First CD4 result < 200 cells/ul or < 14%: CD4 percentage:		DCP_ACTIVE_FORM (clinical_event) PowerForm		
First CD4 result < 200 cells/ul or < 14%: Collection Date	First CD4 result < 200 cells/ul or < 14%: Collection Date		DCP_ACTIVE_FORM (clinical_event) PowerForm		
Other CD4 result < 200 cells/ul or < 14%: CD4 count	Other CD4 result < 200 cells/ul or < 14%: CD4 count		DCP_ACTIVE_FORM (clinical_event) PowerForm		

Other CD4 result < 200 cells/ul or < 14%: CD4 percentage:	Other CD4 result < 200 cells/ul or < 14%: CD4 percentage:		DCP_ACTIVE_FORM (clinical_event) PowerForm		
Other CD4 result < 200 cells/ul or < 14%: Collection Date	Other CD4 result < 200 cells/ul or < 14%: Collection Date		DCP_ACTIVE_FORM (clinical_event) PowerForm		
Did documented laboratory test results meet approval HIV diagnostic algorithm?	Did documented laboratory test results meet approval HIV diagnostic algorithm?	Values are as follows: - Yes - No - Unknown	DCP_ACTIVE_FORM (clinical_event) PowerForm		
If yes, provide date (specimen collection date if Known) of earliest positive test for this algorithm:	If yes, provide date (specimen collection date if Known) of earliest positive test for this algorithm:		DCP_ACTIVE_FORM (clinical_event) PowerForm		
If HIV laboratory tests were not documented, is HIV diagnosis documented by a physician	If HIV laboratory tests were not documented, is HIV diagnosis documented by a physician	Values are as follows: - Yes - No - Unknown	DCP_ACTIVE_FORM (clinical_event) PowerForm		
If yes, provide date of documentation by physician:	If yes, provide date of documentation by physician:		DCP_ACTIVE_FORM (clinical_event) PowerForm		
Candidiasis, esophageal	Candidiasis, esophageal	ICD10	DCP_ACTIVE_FORM (clinical_event) PowerForm		
Candidiasis, esophageal: Date	Candidiasis, esophageal: Date		DCP_ACTIVE_FORM (clinical_event) PowerForm		
Cryptococcosis, extrapulmonary	Cryptococcosis, extrapulmonary	ICD10	DCP_ACTIVE_FORM (clinical_event) PowerForm		
Cryptococcosis, extrapulmonary: Date	Cryptococcosis, extrapulmonary: Date		DCP_ACTIVE_FORM (clinical_event) PowerForm		
Cytomegalovirus disease (other than in liver, spleen or nodes)	Cytomegalovirus disease (other than in liver, spleen or nodes)	ICD10	DCP_ACTIVE_FORM (clinical_event) PowerForm		
Cytomegalovirus disease (other than in liver, spleen or nodes): Date	Cytomegalovirus disease (other than in liver, spleen or nodes): Date		DCP_ACTIVE_FORM (clinical_event) PowerForm		
Herpes simple: chronic ulcer(s) (>1 mo. duration), bronchitis, pneumonitis or esophagitis	Herpes simple: chronic ulcer(s) (>1 mo. duration), bronchitis, pneumonitis or esophagitis	ICD10	DCP_ACTIVE_FORM (clinical_event) PowerForm		
Herpes simple: chronic ulcer(s) (>1 mo. duration), bronchitis, pneumonitis or esophagitis: Date	Herpes simple: chronic ulcer(s) (>1 mo. duration), bronchitis, pneumonitis or esophagitis: Date		DCP_ACTIVE_FORM (clinical_event) PowerForm		
Kaposi's sarcoma	Kaposi's sarcoma	ICD10	DCP_ACTIVE_FORM (clinical_event) PowerForm		
Kaposi's sarcoma: Date	Kaposi's sarcoma: Date		DCP_ACTIVE_FORM (clinical_event) PowerForm		
Pneumocystis	Pneumocystis	ICD10	DCP_ACTIVE_FORM (clinical_event) PowerForm		
Pneumocystis: Date	Pneumocystis: Date		DCP_ACTIVE_FORM (clinical_event) PowerForm		
Wasting syndrome due to HIV	Wasting syndrome due to HIV	ICD10	DCP_ACTIVE_FORM (clinical_event) PowerForm		
Wasting syndrome due to HIV: Date	Wasting syndrome due to HIV: Date		DCP_ACTIVE_FORM (clinical_event) PowerForm		
Has This Patient been Informed of His/Her HIV Infection?	Has This Patient been Informed of His/Her HIV Infection?	Values are as follows: - Yes - No - Unknown	DCP_ACTIVE_FORM (clinical_event) PowerForm		
Patient 's Medical Treatment is Primary Reimbursed by:	Patient 's Medical Treatment is Primary Reimbursed by:	Values are as follows: - 1-Medicaid - 2-Private Insurance/HMO - 3- No Coverage - 4-Other Public Funding - 9 - Unknown	DCP_ACTIVE_FORM (clinical_event) PowerForm		
Is This Patient Currently Pregnant?	Is This Patient Currently Pregnant?	Values are as follows: - Yes - No - Unknown	DCP_ACTIVE_FORM (clinical_event) PowerForm		
Has This Patient Delivered Live -Born Infants?	Has This Patient Delivered Live -Born Infants?	Values are as follows: - Yes - No - Unknown	DCP_ACTIVE_FORM (clinical_event) PowerForm		
Patient's Live Born Child First Name	Patient's Live Born Child First Name		DCP_ACTIVE_FORM (clinical_event) PowerForm		
Patient's Live Born Child Middle Name	Patient's Live Born Child Middle Name		DCP_ACTIVE_FORM (clinical_event) PowerForm		
Patient's Live Born Child Last Name	Patient's Live Born Child Last Name		DCP_ACTIVE_FORM (clinical_event) PowerForm		
Child Soundex	Child Soundex		DCP_ACTIVE_FORM (clinical_event) PowerForm		
Child's Date of Birth	Child's Date of Birth		DCP_ACTIVE_FORM (clinical_event) PowerForm		
Child's Coded ID:	Child's Coded ID:		DCP_ACTIVE_FORM (clinical_event) PowerForm		
Child's STATENO:	Child's STATENO:		DCP_ACTIVE_FORM (clinical_event) PowerForm		
Patient's Live Born Child Hospital of Birth: Name	Patient's Live Born Child Hospital of Birth: Name		DCP_ACTIVE_FORM (clinical_event) PowerForm		
Hospital of Birth: Phone Number	Hospital of Birth: Phone Number		DCP_ACTIVE_FORM (clinical_event) PowerForm		
Hospital of Child Birth: Street Address	Hospital of Child Birth: Street Address		DCP_ACTIVE_FORM (clinical_event) PowerForm		
Hospital of Child Birth: City	Hospital of Child Birth: City		DCP_ACTIVE_FORM (clinical_event) PowerForm		
Hospital of Child Birth: County	Hospital of Child Birth: County		DCP_ACTIVE_FORM (clinical_event) PowerForm		
Hospital of Child Birth: State/County	Hospital of Child Birth: State/County		DCP_ACTIVE_FORM (clinical_event) PowerForm		
Hospital of Child Birth: Zip Code	Hospital of Child Birth: Zip Code		DCP_ACTIVE_FORM (clinical_event) PowerForm		
Main Source of Testing and Treatment History Information (select one)	Main Source of Testing and Treatment History Information (select one)	Value are as follows: - Patient Interview - Medical Record Review - Provider Report - NHM&E/PEMS - Others (specify)	DCP_ACTIVE_FORM (clinical_event) PowerForm		
Main Source of Testing and Treatment History Information (select one): Other (specify)			DCP_ACTIVE_FORM (clinical_event) PowerForm		
Ever Had a Positive HIV Test?	Ever Had a Positive HIV Test?	Values are as follows: - Yes - No - Refused - Don't Know/Unknown	DCP_ACTIVE_FORM (clinical_event) PowerForm		
Date of First Positive HIV Test	Date of First Positive HIV Test		DCP_ACTIVE_FORM (clinical_event) PowerForm		

Ever Had a Negative HIV Test?		Values are as follows: - Yes - No - Refused - Don't Know/Unknown	DCP_ACTIVE_FORM (clinical_event) PowerForm		
Date of Last Negative HIV Test.	Date of Last Negative HIV Test.		DCP_ACTIVE_FORM (clinical_event) PowerForm		
Number of Negative HIV Tests Within 24 Months Before First Positive Test (#)			DCP_ACTIVE_FORM (clinical_event) PowerForm		
Number of Negative HIV Tests Within 24 Months Before First Positive Test (#): Refused			DCP_ACTIVE_FORM (clinical_event) PowerForm		
Number of Negative HIV Tests Within 24 Months Before First Positive Test (#): Don't Know/Unknown			DCP_ACTIVE_FORM (clinical_event) PowerForm		
Ever Taken Any Antiretrovirals (ARVs)?		Values are as follows: - Yes - No - Refused - Don't Know/Unknown	DCP_ACTIVE_FORM (clinical_event) PowerForm		
If Yes, What ARV Medications?			DCP_ACTIVE_FORM (clinical_event) PowerForm		
Date ARVs First Taken			DCP_ACTIVE_FORM (clinical_event) PowerForm		
Date ARVs Last Taken			DCP_ACTIVE_FORM (clinical_event) PowerForm		

REPORT NAME	TB Registry/Report						
REPORT REQUIREMENT	This report will be used by DPH TBSP to identify and monitor patients evaluated for TB infection and TB disease. This report must contain data pertaining to the patient's overarching current and historical data over the course of perhaps many clinical encounters to complete the TB evaluation and associated treatment of TB infection or TB disease.						
	DATA FIELDS (Required Data)	FIELD DEFINITION (Data Element)	Field Object (Values)	TABLE FROM WHICH DATA IS PULLED	SPECIFIC FIELD WITHIN TABLE FROM WHICH DATA IS PULLED	Data entry/ view location	Notes
	Last Name	Last Name		Powerchart	last_name	Patient Information Demographic	
	First Name	First Name		Powerchart	first_name	Patient Information Demographic	
	Middle Initial	Middle Name		Powerchart	middle_name	Patient Information Demographic	
	DOB	Date of Birth				Patient Information Demographic	
	MRN	Medical Record Number		Powerchart	mrn = alias	Patient Information Demographic	
	Sex	Gender at Birth		Powerchart	sex_cd	Patient Information Demographic	
	SSN	Social Security Number		Powerchart	ssn	Patient Information Demographic	
	Race	Race as indicated by the patient		Powerchart	race_cd	Patient Information Demographic	
	Ethnicity	Ethnicity as indicated by the patient		Powerchart	ethnic_cd	Patient Information Demographic	
	Marital Status	Marital Status		Powerchart	marital_cd	Patient Information Demographic	
	Address (city, state, zip code)	Home Address				Patient Information Demographic	
	Census Tract	Census Tract		DCP_ACTIVE_FORM (clinical_event) PowerForm		Patient Information Ad-Hoc	Is Census Tract not captured along with the Address at Registration, or in the Powerchart? If NOT, then add to Patient Information Tab
	Telephone Number - Landline	Patient phone number	(999) 999-9999	Powerchart	home_phone	Patient Information Demographic	
	Telephone Number - Mobile						
	SSN	Social Security Number	999-99-9999	Powerchart	ssn	Patient Information Demographic	
	Country of Birth	Patient's birthplace		Powerchart	birth_place	Patient Information Demographic	
	Is Patient Living with Spouse or Partner		Refer to the Patient Information Tab: Single response allowed!				
	Name of Spouse or Partner		Refer to the Patient Information Tab: Single response allowed!				
	Age of Spouse or Partner		Refer to the Patient Information Tab: Single response allowed!				
	Child under five (5 years of age) living in the household?		Refer to the Patient Information Tab: Single response allowed!				
	Patient is less than fifteen (15) years old?		Refer to the Patient Information Tab: Single response allowed!				
	Patient lived Outside U.S. greater than 2 months		Refer to the Patient Information Tab: Single response allowed!				
	Is Patient living in a Homeless Shelter		Refer to the Patient Information Tab: Single response allowed!				
	Name of Homeless Shelter		Refer to the Patient Information Tab: Single response allowed!				
	Homeless Service Provider ID Los Angeles Homeless Services Authority ID		Refer to the Patient Information Tab:				
	Resident of Correctional Facility at time of diagnosis	Resident of Correctional Facility at time of diagnosis	Refer to the Patient Information Tab: Single response allowed!	DCP_ACTIVE_FORM (clinical_event) PowerForm		Patient Information Ad-Hoc	
	Type of Correctional Facility		Refer to the Patient Information Tab: Single response allowed!				
	Resident of Long Term Care Facility at time of diagnosis	Resident of Long Term Care Facility	Refer to the Patient Information Tab: Single response allowed!	DCP_ACTIVE_FORM (clinical_event) PowerForm		Patient Information Ad-Hoc	
	Primary Occupation in last 12 months	Primary Occupation past year	Refer to the Patient Information Tab: Single response allowed!	DCP_ACTIVE_FORM (clinical_event) PowerForm		Patient Information Ad-Hoc	
	Date Arrived in USA	Date Arrival in USA	Refer to the Patient Information Tab:	DCP_ACTIVE_FORM (clinical_event) PowerForm		Patient Information Ad-Hoc	
	Immigration Status at first entry	Immigration status at entry to USA	Refer to the Patient Information Tab: Single response allowed!	DCP_ACTIVE_FORM (clinical_event) PowerForm		Patient Information Ad-Hoc	
	Alien Number Assigned by US State Dept. to Immigrants, Refugees, Parolees...	Alien Number assigned to immigrants	Refer to the Patient Information Tab:	DCP_ACTIVE_FORM (clinical_event) PowerForm		Patient Information Ad-Hoc	
	DPH-CHS Medical Record Number		Refer to the Patient Information Tab:	DCP_ACTIVE_FORM (clinical_event) PowerForm			
	TRIMS DP Number		Refer to the Patient Information Tab:	DCP_ACTIVE_FORM (clinical_event) PowerForm			
	California Immunization Registry ID		Refer to the Patient Information Tab:	DCP_ACTIVE_FORM (clinical_event) PowerForm			
Reason for Screening							
	TB Screening Center - Facility Code & Name	TB Screening Center - Facility Code & Name	Facility where patient was registered when screened			Patient Information Ad-Hoc	
	Date Screened	Date Screened		DCP_ACTIVE_FORM (clinical_event) PowerForm			
	Reason for Screening		Refer to the Reason for Screening Tab: Single response allowed!	DCP_FORM_ACTIVITY (clinical event)			
	Contact (all that apply)	Type of Contact	Refer to the Reason for Screening Tab: Multiple responses allowed!	DCP_FORM_ACTIVITY (clinical event)			Detail for Reasons = Contact

	Contact Priority		Refer to the Reason for Screening Tab: Single response allowed!	DCP_FORM_ACTIVITY (clinical event)			
	Contact Investigation Indicated		Refer to the Reason for Screening Tab: Single response allowed!	DCP_FORM_ACTIVITY (clinical event)			
	Pre-immigration X-ray available for comparison?		Refer to the Reason for Screening Tab: Single response allowed!	DCP_FORM_ACTIVITY (clinical event)			Detail for Reasons = Class B1; and Class B2 or B3.
	U.S. Interpretation of Pre-immigration X-ray		Refer to the Reason for Screening Tab: Single response allowed!	DCP_FORM_ACTIVITY (clinical event)			
	Other Pre-immigration CXR abnormalities (all that apply)		Refer to the Reason for Screening Tab: Multiple responses allowed!	DCP_FORM_ACTIVITY (clinical event)			
	U.S. Domestic CXR Done?		Refer to the Reason for Screening Tab: Single response allowed!	DCP_FORM_ACTIVITY (clinical event)			
	Date of U.S. CXR			DCP_FORM_ACTIVITY (clinical event)			
	Interpretation of U.S. Domestic CXR		Refer to the Reason for Screening Tab: Single response allowed!	DCP_FORM_ACTIVITY (clinical event)			
	Other U.S. Domestic CXR abnormalities		Refer to the Reason for Screening Tab: Multiple responses allowed!	DCP_FORM_ACTIVITY (clinical event)			
	Comparison of U.S. CXR to Pre-immigration CXR		Refer to the Reason for Screening Tab: Single response allowed!	DCP_FORM_ACTIVITY (clinical event)			
	Treatment Received Overseas			DCP_FORM_ACTIVITY (clinical event)			
	Completed Treatment Pre-immigration		Refer to the Reason for Screening Tab: Single response allowed!	DCP_FORM_ACTIVITY (clinical event)			
	Treatment Dates Known?		Refer to the Reason for Screening Tab: Single response allowed!	DCP_FORM_ACTIVITY (clinical event)			
	Treatment Start Date			DCP_FORM_ACTIVITY (clinical event)			
	Treatment End Date			DCP_FORM_ACTIVITY (clinical event)			
	Standard Treatment			DCP_FORM_ACTIVITY (clinical event)			
	Treatment Reported by?		Refer to the Reason for Screening Tab: Single response allowed!	DCP_FORM_ACTIVITY (clinical event)			
	Arrived on Treatment?		Refer to the Reason for Screening Tab: Single response allowed!	DCP_FORM_ACTIVITY (clinical event)			
	Treatment Start Date (arrived on treatment)			DCP_FORM_ACTIVITY (clinical event)			
	Pre-immigration concerns		Refer to the Reason for Screening Tab: Single response allowed!	DCP_FORM_ACTIVITY (clinical event)			
TB Symptom & Risk Factor Screening							
	Symptom Screening		Refer to Symptom Screening Tab: Multiple responses allowed!				
	Risk Factor Screening		Refer to the Risk Factor Screening Tab: Multiple responses allowed!	DCP_ACTIVE_FORM (clinical_event) PowerForm		Patient Information Ad-Hoc	
	Year of Prior TB Disease Diagnosis						
	Year of Prior LTBI Diagnosis						
	HIV/AIDS Status	HIV/AIDS Status	Refer to the HIV Status Tab: Single response allowed!	Powerchart DCP_FORMS_ACTIVITY (clinical event)		View Request Information Order Laboratory Results	
	Date of HIV Test for HIV/AIDS Status	Test Date for HIV		Powerchart		View Request Information Order Laboratory Results	
TB EVALUATION: Laboratory Tests Ordered Results: Need to determine whether laboratory test(s) ordered during an clinical encounter, and obtain an identifier in order to track laboratory diagnostic results.							
	IGRA Test Performed?		Values: Yes; No				
	IGRA Test Order Number						
	IGRA Test Type		Value: QFT; T-SPOT				
	IGRA Specimen Collection Date						
	IGRA Accession Number						
	IGRA Test Result: Qualitative						
	IGRA Test Result: Quantitative						
	IGRA Test Result Report Date						
	Sputum Smear & Culture Ordered?		Values: Yes; No				
	Sputum Smear & Culture Order Number						
	Sputum Specimen Collection Date						
	Sputum Smear & Culture Accession Number						
	Sputum Smear Result						
	Sputum Smear Result Report Date						
	Sputum Culture Result						
	Sputum Culture Result Report Date						
	Other Specimen Type Smear & Culture Ordered?		Values: Yes; No				
	Other Specimen Type Smear & Culture Order Number						
	Other Specimen Type						
	Other Specimen Type Specimen Collection Date						
	Other Specimen Type Smear & Culture Accession Number						
	Other Specimen Type Smear Result						
	Other Specimen Type Smear Result Report Date						
	Other Specimen Type Culture Result						
	Other Specimen Type Culture Result Report Date						

	NAA Test Ordered?		Values: Yes; No				
	NAA Test Order Number						
	NAA Test Specimen Collection Date						
	NAA Test Accession Number						
	NAA Test Result						
	NAA Test Result Report Date						
	Initial Drug Susceptibility Testing Done?		Value: Yes; No; Unknown				
	Date First Isolate Collected for Drug Susceptibility Testing						
	Specimen Type for First Isolate Collected for DST		Value: Sputum; 2-digit Anatomic Code - See Site of Disease Tab				
	Initial Drug Susceptibility Testing Results						
	TB EVALUATION: Clinical Test Performed Test Results Reviewed: Need to capture whether clinical test(s) were performed during an clinical encounter, and obtain the diagnostic result(s). Also need to capture the review of specific test results reviewed, such as Chest X-ray and Chest CT Scan reviews.						
	Date of Documented Prior IGRA Test						
	Type of Documented Prior IGRA Test		Value: QFT; T-SPOT				
	Documented Prior IGRA Test: Qualitative Result		Value: Positive; Negative; Indeterminant; Borderline				
	Date of Documented Prior Mantoux Tuberculin Skin Test						
	Documented Prior Mantoux Tuberculin Skin Test: Qualitative Result		Value: Positive; Negative				
	Documented Prior Mantoux Tuberculin Skin Test: Quantitative Result		Value: MM				
	Mantoux Tuberculin Skin Test Placed?		Values: Yes; No	DCP_ACTIVE_FORM (clinical_event) PowerForm			
	Date Mantoux Tuberculin Skin Test Placed			DCP_ACTIVE_FORM (clinical_event) PowerForm			
	Date Mantoux Tuberculin Skin Test Read			DCP_ACTIVE_FORM (clinical_event) PowerForm			
	Mantoux Tuberculin Skin Test Reading MM			DCP_ACTIVE_FORM (clinical_event) PowerForm			
	Mantoux Tuberculin Skin Test Interpretation		Values: Positive; Negative; Unknown	DCP_ACTIVE_FORM (clinical_event) PowerForm			
	Chest X-ray Ordered this Encounter?		Values: Yes; No	DCP_ACTIVE_FORM (clinical_event) PowerForm		Patient Information Ad-Hoc	
	Chest X-ray Reviewed		Values: Yes; No	DCP_ACTIVE_FORM (clinical_event) PowerForm		Patient Information Ad-Hoc	
	Date Chest X-ray Performed			DCP_ACTIVE_FORM (clinical_event) PowerForm			
	Interpretation of Chest X-ray		Values: Normal; Abnormal - Cavitory; Abnormal - Non-Cavitory; Abnormal-Miliary; Abnormal-Other Pathology	DCP_ACTIVE_FORM (clinical_event) PowerForm		Patient Information Ad-Hoc	
	Abnormal Finding Chest X-ray		Values: TB Suspect Routine; TB Suspect Urgent; Other Pathology	DCP_ACTIVE_FORM (clinical_event) PowerForm		Patient Information Ad-Hoc	
	Comparison to Prior CXR?		Values: No; Yes - Stable; Yes - Improving; Yes - Worsening	DCP_ACTIVE_FORM (clinical_event) PowerForm			
	Date Prior CXR Performed			DCP_ACTIVE_FORM (clinical_event) PowerForm			
	Chest CT Scan Ordered this Encounter?		Values: Yes; No	DCP_ACTIVE_FORM (clinical_event) PowerForm		Patient Information Ad-Hoc	
	Chest CT Scan Reviewed		Values: Yes; No	DCP_ACTIVE_FORM (clinical_event) PowerForm		Patient Information Ad-Hoc	
	Date Chest CT Scan Performed			DCP_ACTIVE_FORM (clinical_event) PowerForm			
	Interpretation of ChestCT Scan		Values: Normal; Abnormal - Cavitory; Abnormal - Non-Cavitory; Abnormal-Miliary; Abnormal-Other Pathology	DCP_ACTIVE_FORM (clinical_event) PowerForm		Patient Information Ad-Hoc	
	Abnormal Finding CT Scan		Values: TB Suspect Routine; TB Suspect Urgent; Other Pathology	DCP_ACTIVE_FORM (clinical_event) PowerForm		Patient Information Ad-Hoc	
	TB Evaluation Complete	TB Evaluation Complete	SEE TB-Eval-Summary-Treatment Tab	DCP_ACTIVE_FORM (clinical_event) PowerForm		Patient Information Ad-Hoc	
	Final or Interim ATS Classification		SEE TB-Eval-Summary-Treatment Tab	DCP_ACTIVE_FORM (clinical_event) PowerForm		DCP_ACTIVE_FORM (clinical_event) PowerForm	
	Site of Disease		See TB-III-Site-of-Disease Tab	DCP_ACTIVE_FORM (clinical_event) PowerForm			If ATS Classification = TB III
	Treatment Recommended		SEE TB-Eval-Summary-Treatment Tab	DCP_ACTIVE_FORM (clinical_event) PowerForm		Patient Information Ad-Hoc	
	Recommended Treatment Administration Method	Treatment Administration	SEE TB-Eval-Summary-Treatment Tab	DCP_ACTIVE_FORM (clinical_event) PowerForm		Patient Information Ad-Hoc	
	Is Patient on ART Therapy?		SEE TB-Eval-Summary-Treatment Tab	DCP_ACTIVE_FORM (clinical_event) PowerForm			
	LTBI Treatment Priority		SEE TB-Eval-Summary-Treatment Tab	DCP_ACTIVE_FORM (clinical_event) PowerForm			If ATS Classification = TB II
	Source of Supervision for Treatment	Source of Supervision for Treatment	Values are as follows: - DPH - Other	DCP_ACTIVE_FORM (clinical_event) PowerForm			
	Recommended LTBI Treatment Regimen		SEE TB-Eval-Summary-Treatment Tab				
	LTBI Treatment Initiated	LTBI Treatment Initiated	SEE TB-Eval-Summary-Treatment Tab	DCP_ACTIVE_FORM (clinical_event) PowerForm		Patient Information Ad-Hoc	
	LTBI Treatment Initiation Date			DCP_ACTIVE_FORM (clinical_event) PowerForm			
	Completed Treatment	Completed Treatment		DCP_ACTIVE_FORM (clinical_event) PowerForm		Patient Information Ad-Hoc	
	TB Treatment Center - Facility Code & Name	TB Treatment Center - Facility Code & Name	Facility where patient was registered when receiving treatment			Patient Information Ad-Hoc	
	Date of Closure	Date Closed		DCP_ACTIVE_FORM (clinical_event) PowerForm		Patient Information Ad-Hoc	
	Date Therapy Stopped						
	Reason Therapy Stopped		SEE Closure Information Tab				
	Directly Observed Therapy Status		SEE Closure Information Tab				
	Number of Weeks on DOT						
	Reason Therapy Extended Greater than 12 Months		SEE Closure Information Tab				
	Documented Sputum Conversion		SEE Closure Information Tab				
	Final Drug Susceptibility Testing Done?		SEE Closure Information Tab				
	Date Isolate Collected for Final Drug Susceptibility Testing						

	Specimen Type for Final Isolate Collected for DST		Value: Sputum; 2-digit Anatomic Code - See Site of Disease Tab				
	Final Drug Susceptibility Testing Results						

ATTACHMENT D.9

LIST OF USER DEFINED FORMS (UDFs)

System Requirements and Specifications for UDFs will be gathered and documented pursuant to Task 26 (User Defined Forms for Upgraded System) of Exhibit B (Statement of Work). For the avoidance of doubt, once delivered under the Statement of Work, UDFs are available for use by all Users.

1) **Veterinary Public Health**

- Animal Bite Surveillance UDF Tab
- Animal Disease Surveillance UDF Tab
- Animal Bite Surveillance UDF available in Community Reporting Module
- Animal Disease Surveillance UDF available in Community Reporting Module

2) **Vaccine Preventable Disease Control Program – Perinatal Hepatitis B**

- Table Case Database Information UDF/Tab
- Laboratory Reports Tracking information as UDF/Tab
- Mom Database information as UDF/Tab
- Hospital Delivery Reports UDF (for Community Reporting Module)
- PEP Error UDF
- Transfer Forms UDFs:
 - i. In-State
 - ii. Out-of-State
- Accurint Request Form/UDF

3) **Vaccine Preventable Disease (VPD) Control Program (VPDCP) – Epi Unit**

- 10 CalREDIE VPD UDFs for pertussis, measles, mumps, rubella, congenital rubella, diphtheria, tetanus, varicella (hospitalized and fatal), Haemophilus influenza, polio
 - i. CalREDIE UDFs should auto populate based on data entry from 6 tabs
 - ii. Form is saved as a UDF in IRIS electronic filing cabinet (EFC)
- 10 VPDCP Initial Assessment Forms (IAF) for pertussis, measles, mumps, rubella, congenital rubella, diphtheria, tetanus, varicella (hospitalized and fatal), Haemophilus influenza, polio
 - i. The forms were provided in the Zip file to Contractor via its IssueTrack system in December 2017
 - ii. IAF UDFs should auto populate based on data entry from 6 tabs
 - iii. Form is saved as a UDF in IRIS EFC
- Measles Exposure Interview Form
 - i. The form was provided in the Zip file to Contractor via its IssueTrack system in December 2017
 - ii. Incorporate all questions in form into contact investigation record & auto populate form
 - iii. Form is saved as a UDF in IRIS EFC

- County's Public Health Laboratory (PHL) and California Department of Public Health (CDPH) Viral and Rickettsial Disease Laboratory (VRDL) Requisition Forms
 - i. The forms were provided in the Zip file to Contractor via its IssueTrack system in December 2017
 - ii. Auto populate fields in the forms with data in Laboratory tab
 - iii. Accompanying email notification templates
- Measles Screening Form for VPDCP Nurses
 - i. The form was provided to Contractor via its IssueTrack system in December 2017
 - ii. Auto populate as many fields as possible from the tabs
 - iii. Form is saved as a UDF in IRIS EFC
- Facility Involvement Tab
- Create VPDCP measles activity log in the IRIS EFC to verify exposure source and sites/contacts exposed during infectious period
 - i. The form was provided to Contractor via its IssueTrack system in December 2017
 - ii. Activity Log will auto populate dates based on rash onset date
 - iii. Form is saved as a UDF in IRIS EFC

4) Acute Communicable Disease Control Program (*forms developed by ACDC)

- Hospital Outreach Unit (HOU)
 - i. *Cocci Form
 - ii. Legionella Case Report CDPH 8588
 - iii. Hospital-Acquired Infection Outbreak – Acute Care
 - iv. Hospital-Acquired Infection Outbreak – Sub-Acute Facility
 - v. Hospital-Acquired Infection Outbreak – Outpatient Healthcare Setting
- Vector-borne
 - i. Acute Flaccid Myelitis: Patient Case Summary Form CDPH-CDC-OMB No. 0920-0009
 - ii. Chikungunya Case Report CDPH 8618
 - iii. West Nile Virus Infection Case Report CDPH 8687 (priority)**
 - iv. *ACDC West Nile Virus – Positive Blood Donor to CDPH Report and Guidelines (priority)**
 - v. Dengue Case Report CDPH 8670
 - vi. Lyme Disease Case Report CDPH 8470
 - vii. Malaria Case Report CDPH 8657
 - viii. Meningococcal Disease Case Report CDPH 8469 (priority)**
 - ix. *Meningococcal Case Summary Form ACDC (priority)**
 - x. Typhus and Other Non-Spotted Fever Rickettsioses Case Report
 - xi. Ehrlichiosis/Anaplasmosis Case Report CDPH 8573
 - xii. Babesiosis Case Report CDPH 8270
 - xiii. Ehrlichiosis/Anaplasmosis Case Report CDPH 8573

- xiv. Hantavirus Infection Case Report CDPH 9077
 - xv. Leptospirosis Case Report CDPH 8577
 - xvi. Plague (Human) Case Report CDPH 8549
 - xvii. Relapsing Fever Case Report CDPH 8561
 - xviii. Spotted Fever Rickettsioses Case Report CDPH 8561
 - xix. Yellow Fever Case Report CDPH 8584
 - xx. Zika Case Report
- Foodborne
 - i. E. coli 0157, Other STEC, Shiga Toxin Positive Feces, and/ or HUS Case Report CDPH 8555 (CDPH will change form in early 2018; new form to be made into UDF)
 - ii. *Yersinosis
 - iii. *Brucellosis
 - iv. *Salmonellosis Epi Form and Contact Roster
 - v. Listeriosis CDPH 8296
 - vi. Listeriosis UDFs in System currently
 - vii. Vibrio CDPH 8587
 - a. CA_oystersupplemental_V4_fillable
 - b. CDC COVIS_Section5_2017_Fillable
- Outbreaks
 - i. Smallpox Evaluation Worksheet
 - ii. Smallpox Post-Event Surveillance Instructions
 - iii. *Ebola Virus Disease Viral Hemorrhagic Fevers (Ebola)
 - iv. Outbreaks (acute care health facility)
 - v. Atypical Scabies – Community CDPH 8554
 - vi. *Atypical Scabies Outbreak – Healthcare Facility/Hospital
 - vii. Anthrax Human Case Report CDPH 8578
 - viii. Botulism Case Report CDPH 8547
- Hepatitis, Arbovirus, Influenza
 - i. Non-Skilled Nursing Facility (SNF) Carbapenem-Resistant Enterobacteriaceae (CRE)
 - ii. *Viral Hepatitis A Case Report
 - iii. *Viral Hepatitis B or C Case Report
 - iv. Hep E CDPH 8701 (revised 02/17)
- Policy
 - i. Tularemia Case Report CDPH 8559
 - ii. Q-Fever Case Report CDPH 8548

5. Tuberculosis (TB) Control Program (TBCP)

- Tuberculosis Control Program

- i. Clinical Information UDF
 - ii. Laboratory UDF
 - iii. TB Contact Investigation UDF
 - iv. TBCP Contact Investigation Data Management and Summary of Contact Investigations UDF
 - v. Home Evaluation Task Assignment UDF (section to be included in TB Contact Investigation UDF)
- Filing Cabinet UDFs
 - i. Health Officer Log Report UDF
 - ii. Class B TB Notification UDF
 - iii. Center for Disease Control Electronic Disease Notification Worksheet UDF (or report)
 - iv. TB Isolate Data Form UDF
 - v. TB Genotyping Results Form UDF
 - vi. Patient Interview Services UDF (homeless and other targeted populations)
 - vii. TBCP Surveillance Nurse Worksheet UDF
 - viii. Atypical Lab Result Patient UDF
 - ix. TBCP Liaison Nurse Worksheet UDF
 - x. H-455 Request for Legal Intervention UDF (Related Form Template list below)
 - xi. Legal Order of Examination
 - xii. Legal Order of Directly Observed Therapy
 - xiii. Interventions Attempted to Promote Patient Adherence with Prescribed Therapy
 - xiv. Checklist in Support of a Request for A Civil Order of Detention
 - xv. Civil Order of Detention for Tuberculosis
 - xvi. Advisement of Rights
 - xvii. Individualized Assessments
 - xviii. Civil Order for Exclusion of Attendance at the Workplace
 - xix. Order of Home Isolation for Infectious Tuberculosis
 - xx. Notice of Termination of the Order for Civil Detention in a Health Facility
 - xxi. Cohort Review Case Presentation UDF
 - xxii. Cohort Review Contact Investigation Presentation UDF
 - xxiii. Incentive & Enabler Project Service Request (application) UDF
 - xxiv. Incentive & Enabler Service Usage UDF
 - xxv. Food, Shelter, Incentives and Enablers (FSIE) Invoice UDF (or report)
 - xxvi. Laboratory Error Investigation UDF
 - xxvii. 2020 Report of Verified Case of Tuberculosis (RVCT), Follow Up One, Follow Up Two (must be consistent with CalREDIE)

- xxviii. 2020 Multi-Drug resistant (MDR)/Extensively Drug Resistant (XDR) TB Supplemental Surveillance Form (must be consistent with CalREDIE)
 - xxix. Inter-jurisdictional Referral UDF
 - xxx. Inter-jurisdictional Follow-Up UDF
- Outbreak or Special Investigations
 - i. Genotype Cluster Investigation UDF
 - ii. Genotype Cluster Contact Investigation Analysis UDF
 - iii. Genotype Cluster Recent Transmission UDF
 - iv. TBCP Community Screening Services UDF (example HIV-Ambulatory Outpatient Medical (AOM) providers, scalable to other population provider types)
 - Provider Portal UDFs
 - i. Private Provider Portal Dashboard UDF
 - ii. TBCP Community Provider Screening UDF (example HIV-AOM providers, scalable to other population provider types)
 - iii. H-803 Hospital Admission Initial Report UDF
 - iv. H-803 Hospital Admission 7-Day Follow-up Report UDF
 - v. H-804 Hospital Discharge Approval Request UDF
 - vi. Private Provider Confidential Morbidity Report (CMR) UDF
 - vii. Private Provider 30-Day Follow-up Report UDF

6. Division of HIV and STD Programs

- Sexually Transmitted Disease UDFs
 - i. Syphilis Infection Clinical Form/Tab
 - ii. Syphilis Infection Laboratory Form/Tab
 - iii. Syphilis Infection Health Department Follow-up
 - iv. Syphilis Infection STD Contacts
 - v. Syphilis Patient Interview (in filing cabinet)
 - vi. California Gonococcal Surveillance System (CGSS) Patient Interview (in filing cabinet)
 - vii. Gonococcal Infection Clinical Form/Tab
 - viii. Gonococcal Infection Laboratory Form/Tab
 - ix. Gonococcal Infection Health Department Follow-up
 - x. Gonococcal Infection STD Contacts
 - xi. Chlamydial Infection Clinical Form/Tab
 - xii. Chlamydial Infection Clinical Form/Tab
 - xiii. Chlamydial Infection Laboratory Form/Tab
 - xiv. Chlamydial Infection Health Department Follow-up

7. Community Health Services

- Comprehensive Assessment
- Public Health Nurse (PHN) Monthly TB Class 3/5 Follow-up Form
- Establishing an Infectious Period
- List of Possible Exposure Site(s)
- Individualized Service Plan/Care Plan
- Report of Home Situation

8. Public Health Investigation

- Request for Legal Intervention
- Legal Notice for Examination for Communicable Disease
- Investigative Report
- Legal Order of Directly Observed Therapy
- Civil Order of Detention for Tuberculosis
 - Advisement of Rights
 - Individualized Assessments
 - Individualized Assessments MDR-TB
- Order of Isolation in a Hospital or Institution for the Control of Severe Acute Respiratory Syndrome (SARS)
 - Declaration of Service
- Order of Isolation in a Private Residence for the Control of Severe Acute Respiratory Syndrome (SARS)
 - Addendum
 - Declaration of Service
- Order of Quarantine for the Control of Severe Acute Respiratory Syndrome (SARS)
 - Addendum
 - Declaration of Service
- Order of Isolation in a Hospital or Institution for the Control of Smallpox (Variola virus)
 - Declaration of Service
- Order of Modified Isolation and Fever Surveillance for the Control of Smallpox (Variola virus)
 - Declaration of Service
- Order of Modified Isolation in a Private Residence for the Control of Smallpox (Variola virus)
 - Addendum
 - Declaration of Service
- Order of Modified Isolation in an Alternative Residential Facility for the Control of Smallpox (Variola virus)
 - Addendum

- Declaration of Service
- Order of Quarantine for the Control of Smallpox (Variola virus)
 - Addendum
 - Declaration of Service
- Order of Isolation in a Hospital or Institution for the Control of Influenza
 - Declaration of Service
- Order of Isolation in a Private Residence for the Control of Influenza
 - Addendum
 - Declaration of Service
- Order of Quarantine for the Control of Influenza
 - Addendum
 - Declaration of Service
- Human Immunodeficiency Virus (HIV) Carrier Agreement
- Order of Modified Isolation for Human Immunodeficiency Virus (HIV)
- Legal Notice to Produce Animal for Observation
- Legal Notice to Produce Animal for Fluorescent Rabies Antibody Testing
- Isolation or Quarantine Release Notice
- Tuberculosis Control Program - Complaint Request Letters:
 - Failure to Complete Medical Evaluation
 - Failure to Complete Medical Treatment after Positive Diagnosis
- Public Health Investigation – Complaint Request Letters:
 - Failure to Complete a Medical Evaluation after Positive Diagnosis with Disease
 - Probable Severe Acute Respiratory Syndrome (SARS) – Isolation Order

EXHIBIT E

Minimum System Requirements

1.0 BROWSER WORKSTATION

1.1 *County Staff*

- High speed internet connection*
- Windows 10 Pro/Mac OS
- Intel Core i5 3rd Generation
- 4GB RAM
- 90 GB available disk space, 7200 RPM drive
- IE 11/Chrome/Firefox/Edge/Safari***

1.2 *Community Reporters*

- High speed internet connection*
- Windows 10 Pro/Mac OS**
- Intel Core 2 Duo @ 2.8 GHz
- 4GB RAM
- 90 GB available disk space, 7200 RPM drive
- IE 11/Chrome/Firefox/Edge/Safari***

*High speed internet means Broadband internet. The Federal Communications Commission recommends minimum broadband speed should be 25 Mbps. Contractor recommends a minimum of at least 4 Mbps internet speed.

**Community Reporters with Windows 8 are supported as long as they are using the supported browsers.

***Supported Browsers for Contractor's WorldCare Product Suite version 16:

IE v11 on Windows or macOS

Chrome v64 on Windows or macOS

Edge v16

Safari v11 on macOS or iOS

Firefox v58 on Windows OS for Community Reporting Module only

Many browsers (Chrome, Firefox, etc.) provide updates monthly and increment versions. Contractor provides a configuration file, so County may change these to the latest version. This is documented with each new version upgrade in Contractor's Installation Guide.

EXHIBIT F
SERVICE LEVEL REQUIREMENTS

1. GENERAL

This Exhibit F (Service Level Requirements) and all Attachments hereto (collectively, "Exhibit F") sets forth the scope of, and Contractor's service level commitments regarding, the maintenance, support, hosting and monitoring of the System Software, under County Agreement No. PH-001629 dated May 10, 2011 (together with all Exhibits and Attachments, the "Agreement"), by and between the County of Los Angeles, for its Department of Public Health ("County"), and Atlas Database Software Corp. d/b/a Atlas Development Corporation ("Contractor"). Capitalized terms used in this Exhibit F without definition shall have the meanings given to such terms in the Base Agreement.

The following Attachments are attached to and form a part of this Exhibit F:

Attachment F.1 – Guide to Customer Support Services

Attachment F.2 –Electronic Lab Reporting (ELR) Maintenance and Support Guide

Attachment F.3 – Disaster Recovery Plan

2. SCOPE OF SERVICES; DEFINITIONS

2.1 Contractor shall provide Maintenance Services, Support Services and Hosting Services as specified in this Exhibit F and otherwise in the Agreement. Contractor's provision of such services shall commence on the Effective Date and shall continue throughout the Term.

2.2 As used herein, the following terms have the following meanings:

1. "**Critical**" shall have the meaning set forth in Attachment F.1 (Guide to Customer Support Services).
2. "**Deficiency**" and "**Deficiencies**", whether singular or plural, shall mean any of the following: any defect in design, development, implementation, materials, and/or workmanship; error(s); deviation(s) from applicable published industry standards and/or mutually agreed upon standards; and/or deviation(s) from any of the requirements or any County approved Deliverables or Specifications; and/or other problems, in the case of each of the foregoing, which result in the System, or any System component, not performing in compliance with the provisions of the Agreement, including but not limited to System Requirements and other Specifications, attributable to Contractor or the System or otherwise under Contractor's control. Notwithstanding the foregoing, Deficiencies shall not include any such defects, errors and/or deviations to the extent they are caused by County or other third parties that are beyond Contractor's reasonable control. Deficiency shall be specifically associated with a Severity Level as further defined in Attachment F.1 (Guide to Customer Support Services).
3. "**Deficiency Period**" shall have the meaning set forth in Section 4.8 of this Exhibit F.

4. **“Disaster”** shall mean a catastrophic event that results in significant or potentially significant System Downtime or disruption of the Production Environment rendering the primary Production Environment incapable of being recovered within the timeframe set forth in Attachment F.1 (Guide to Customer Support Services) for Severity Level Critical.
5. **“Disaster Recovery Plan”** shall mean the Disaster Recovery Plan attached hereto as Attachment F.3, as the same may be amended and supplemented from time to time in accordance with the Statement of Work and/or this Exhibit F.
6. **“Disaster Recovery Services”** shall have the meaning set forth in Section 5.5 of this Exhibit F.
7. **“DPH Partners”** shall mean (a) Users of the System other than employees of DPH and (b) other persons and entities that interface with the System in the normal course of County business.
8. **“Final Resolution”** shall have the meaning set forth in Attachment F.1 (Guide to Customer Support Services).
9. **“Interim Solution”** shall have the meaning set forth in Attachment F.1 (Guide to Customer Support Services).
10. **“Response Time”** shall have the meaning set forth in Section 7.2 of this Exhibit F, which shall be separate and apart from the timeframes set forth in chart entitled “Severity Level Response/Resolution Tiers” in Attachment F.1 (Guide to Customer Support Services).
11. **“Service Request”** shall have the meaning set forth in Attachment F.1 (Guide to Customer Support Services).
12. **“Scheduled Downtime”** shall mean System Downtime that has been scheduled as described in Section 6 of this Exhibit F, including, but not limited to, preventive maintenance, updates, upgrades, scheduled reboots, restarts, etc.
13. **“System Availability”** shall mean, with respect to any particular calendar month, the percentage obtained by subtracting Un-Scheduled Downtime during such month from the Total Monthly Time for such month and thereafter dividing the difference so obtained by the Total Monthly Time, with the result multiplied by 100.
14. **“System Downtime”** shall mean any time the System is not performing in accordance with the System Requirements or other Specifications.
15. **“Total Monthly Time”** shall mean all minutes in the relevant calendar month, excluding Scheduled Downtime.
16. **“Un-Scheduled Downtime”** shall mean all minutes of System Downtime other than Scheduled Downtime, as determined in accordance with the applicable of Sections 4.7, 4.8, and/or 5.6 of this Exhibit F.

3. MAINTENANCE SERVICES

- 3.1 Contractor shall provide Maintenance Services for the System as described in this Section 3 and otherwise in this Exhibit F and the Agreement.
- 3.2 Contractor shall provide Updates and Version Releases to the System Software to keep current with Contractor's hosting technology standards, industry standards, Third Party Software upgrades, enhancements, updates, patches, bug fixes, etc., and as provided to Contractor's general customer base in accordance with this Exhibit F, as coordinated with County Project Manager.
- 3.3 Upon release of a new Version Release, County shall have the option to continue to use its then-current Version Release, rather than implement the new Version Release, until the occurrence of both of the following: (a) Contractor has issued two (2) additional Version Releases beyond what County is then using; and (b) twenty-four (24) months have passed. The level of maintenance and support provided by Contractor with respect to the Version Release required to be used by County under this Section 3.3 shall not degrade throughout the Term.
- 3.4 Contractor shall provide Updates that add significant functionality at least once every eighteen (18) months, unless otherwise agreed to by DPH's Chief Information Officer.
- 3.5 Contractor shall notify County Project Manager of all Updates and Version Releases prior to the anticipated installation date thereof and, subject to Sections 3.3, 3.6 and 3.7 of this Exhibit F, installation thereof shall be subject to the prior approval of County Project Manager. Contractor's provision of all Updates and Version Releases shall be at no additional cost to County beyond the Maintenance Fees. Contractor's implementation and associated training services with respect to (a) all Updates shall not exceed one hundred (100) hours and (b) all Version Releases shall not exceed four hundred (400) hours, such implementation and associated training services to be provided by Contractor and paid for by County as Additional Work under the applicable provisions of this Agreement. Any necessary efforts expended beyond one hundred (100) hours for all Updates and four hundred (400) hours for all Version Releases shall be at no additional cost to County, unless mutually agreed by the Parties under a Change Order or Amendment in advance of Contractor expending such efforts. Prior to the implementation of any Update or Version Release, Contractor shall test and ensure such Update or Version Release is Compatible with the other System components, as well as with the County Environment.
- 3.6 If Contractor provides written notice to County Project Manager that a particular Update (a) is necessary for the System Software to continue to perform in accordance with the System Requirements and other Specifications, (b) requires no change in County's business practice, except to the extent that the Update is being provided in order to maintain the System Software's full compliance with the CDC Public Health Information Network, National Electronic Disease Surveillance System requirements and/or other related federal or state laws, rules regulations, and standards, (c) requires no change in the minimum hardware, software, and/or network configurations then set forth on Exhibit E (Minimum System Requirements), and (d) requires no additional cost on behalf of the County to implement, and County Project Manager does not authorize installation thereof, then any experienced Downtime and/or Deficiency as a result of the non-implementation of said Update shall not be counted as Unscheduled Downtime and/or a Deficiency as applicable.

- 3.7 In addition to Contractor's other obligations regarding security set forth in the Agreement, any updates, upgrades, enhancements, patches, bug fixes, etc., including Updates, necessary to remedy a potential security vulnerability in the System (e.g., security breach, closing "back doors" or other intrusion-related problems) shall be provided in such time following Contractor's knowledge of such problem as is commensurate with the risk posed by such problem. The Parties agree that for all purposes under these Service Level Requirements, security vulnerabilities having a risk level of critical/high shall be treated as Deficiencies having a Severity Level of Critical, and security vulnerabilities having a risk level of medium shall be treated as Deficiencies having a Severity Level of Medium. Contractor may provide such Update without County Project Manager's prior approval where Contractor has deemed in its reasonable judgment the risk warrants proceeding without delay. In such a case, Contractor shall notify County Project Manager as soon as reasonably practical. Contractor shall notify County in accordance with Exhibit G (Business Associate Agreement Under Health Insurance Portability and Accountability Act of 1996 (HIPAA)) of the existence of any such problems. Contractor's actions will include, as appropriate:
- a. Confirmation of the security problem/threat;
 - b. Denial of access from the source of the attack;
 - c. Investigation of the extent of the damage, if any;
 - d. Back-up the affected systems and those suspected to be affected;
 - e. Strengthening of defenses everywhere, not just the suspected path used by the attacker;
 - f. Contacting the Internet Service Provider where the threat or attack originated and/or law enforcement to work with Contractor's security team;
 - g. Production of an error report within twenty-four (24) hours detailing Contractor's findings; and
 - h. Continuous monitoring of traffic from the source until risk of further attacks is deemed to be minimized.
- 3.8 Notwithstanding anything to the contrary herein, any Third-Party Software that may be incorporated by Contractor shall become part of the Application Software, shall be subject to the same Maintenance Services obligations and requirements and the Application Software components that are proprietary to Contractor.
- 3.9 Contractor shall deliver to County Project Manager revised Documentation that reflects each Update, Version Release, Additional Modification, Additional Interface and/or Additional Products provided by Contractor under the Agreement, promptly after installation of such Update, Version Release, Additional Modification, Additional Interface or Additional Products, as the case may be. Contractor shall also ensure that all technical staff performing Work under the Agreement are familiar with the updated configuration of the System after installation of such Update, Version Release, Additional Modification, Additional Interface or Additional Product, as the case may be. Contractor shall additionally revise the Disaster Recovery Plan as necessary in connection with each Update, Version Release, Additional Modification, Additional Interface and/or Additional Product. Upon County Project Manager's approval of such revised Disaster Recovery Plan, such revised Disaster Recovery Plan shall be deemed to update the Disaster Recovery Plan attached as Attachment F.3 for all purposes under the Agreement.

4. SUPPORT SERVICES

- 4.1 Contractor shall provide Support Services for the System as described in this Section 4, Attachment F.1 (Guide to Customer Support Services), Attachment F.2 (Electronic Lab Reporting (ELR) Maintenance and Support), and otherwise in this Exhibit F and the Agreement.
- 4.2 Support Services include (a) providing a help desk, (b) responding to and analyzing Service Requests, and (c) correcting any and all Deficiencies with the System resulting in the failure of the System to perform in accordance with the System Requirements and Specifications, including required Response Times, System Availability, and Compatibility.
- 4.3 Contractor shall respond to and analyze Service Requests and remedy all Deficiencies, in each case, in accordance with the applicable timeframes set forth in Attachment F.1 (Guide to Customer Support Services) based upon assigned Severity Level. Without limiting Contractor's obligations under this Exhibit F and Attachment F.1 (Guide to Customer Support Services) to respond to and analyze Service Requests and to perform Disaster Recovery Services, it is understood and agreed that the timeframes set forth in Attachment F.1 (Guide to Customer Support Services) to provide Interim Solution and Final Resolution do not apply to any support issue that is not a Deficiency.
- 4.4 With respect to Compatibility with the County Environment, Contractor shall support version 8.1 Microsoft operating systems, version 11 of Internet Explorer, version 64 of Chrome, version 58 of Firefox, and version 11 Safari, and shall support later versions of Microsoft operating systems, Internet Explorer, Chrome, Firefox, and Safari within the later of: (a) six (6) months of release thereof to the retail public; and (b) six (6) months from County's written notice to Contractor of an intention to implement the later version of a Microsoft operating system and/or specified Internet browser; unless the Parties mutually agree on a different time period.
- 4.5 Additionally with respect to Compatibility with the County Environment, subject to County Project Manager's written approval thereof, Contractor may revise the minimum hardware, software and/or network configuration requirements then specified (or then deemed to be specified) on Exhibit E (Minimum System Requirements) as required to ensure Compatibility with new Version Releases.
 1. Such minimum hardware, software and network configuration requirements shall be limited to those that are (a) required to ensure Compatibility with the new Version Release, and (b) consistent with mainstream personal computer hardware and software (i) in the case of hardware, widely available from a variety of manufacturers no sooner than two (2) years prior to the date of recommendation and capable of running the then-current version of Microsoft Windows, and (ii) in the case of software, widely available from a variety of manufacturers no sooner than one (1) year prior to the date of recommendation, in each case, unless otherwise approved in writing by County Project Manager, such approval not to be unreasonably withheld.
 2. Upon County Project Manager's written approval of any revised minimum hardware, software and/or network configuration requirements under this Section

4.5, such revised minimum hardware, software and network configuration requirements shall be deemed to update Exhibit E (Minimum System Requirements) for all purposes under the Agreement.

3. For the sake of clarity, County shall bear the cost of purchasing any minimum hardware, software and/or network configuration requirements required to ensure Compatibility with a new Version Release, as such minimum requirements are revised by Contractor in accordance with this Section 4.5.
- 4.6 In the event Contractor is not able to remedy a Deficiency relating to Compatibility with respect to a Contractor-recommended County Environment component, Contractor shall reimburse County for the price County paid to acquire such County Environment component.
- 4.7 For each Deficiency, the System shall be deemed to be experiencing Un-Scheduled Downtime from (a) Contractor's failure to provide an Interim Solution for such Deficiency in accordance with the applicable timeframes set forth in Attachment F.1 (Guide to Customer Support Services) until (b) Contractor's provision of an Interim Solution for such Deficiency, provided that (i) County thereafter approves the Interim Solution and (ii) Contractor thereafter provides a Final Resolution within the applicable timeframes set forth in Attachment F.1 (Guide to Customer Support Services).
- 4.8 Notwithstanding Section 4.7 of this Exhibit F, with respect to each six (6) calendar month period during the Term (each a "Deficiency Period"), if the System experiences either (a) more than two (2) Deficiencies having a Severity Level of Critical in any single calendar month during the Deficiency Period, or (b) more than three (3) Deficiencies having a Severity Level of Critical during the Deficiency Period, then commencing with the next Deficiency having a Severity Level of Critical occurring during the Deficiency Period and for each such Deficiency occurring thereafter during the Deficiency Period, the System shall be deemed to be experiencing Un-Scheduled Downtime as follows:
 1. From the earlier of (A) County's report of such Deficiency in accordance with the applicable of Attachment F.1 (Guide to Customer Support Services) or Attachment F.2 (Electronic Lab Reporting (ELR) Maintenance and Support), and (B) Contractor's other knowledge of such Deficiency;
 2. Until Contractor's provision of an Interim Solution for such Deficiency, provided that (1) County thereafter approves the Interim Solution and (2) Contractor thereafter provides a Final Resolution within the applicable timeframes set forth in Attachment F.1 (Guide to Customer Support Services).
 3. The foregoing is subject to the Deficiency reclassification process set forth in Attachment F.1 (Guide to Customer Support Services), Response and Resolution Times, for incorrectly classified Deficiencies.
- 4.9 Contractor shall additionally:
 1. Detect, troubleshoot, correct, and retrieve missing data from connections between hospitals/Labs/ELR gateways and the System Environments;
 2. Update VPN and other connections as requested by DPH Partners;

3. Troubleshoot and reinstall ELR gateway servers and mini-LabAware applications/databases when necessary; and
4. Assist with troubleshooting access issues between DPH Partners and County pertaining to DPH Partners' use of the System Software.

5. HOSTING SERVICES

- 5.1 Contractor shall provide Hosting Services as described in this Section 5 and otherwise in this Exhibit F and the Agreement.
- 5.2 Contractor shall operate and maintain the System Environment, including the System Hardware, System Network and System Operating Software. Contractor shall locate all System Environments within the United States of America.
- 5.3 Contractor shall repair, upgrade or replace these System Environment components during the Term as is necessary for the System to perform in accordance with the System Requirements and other Specifications and to support and be compatible with any Updates, Version Releases, Additional Modifications and/or Additional Interfaces provided by Contractor under the Agreement.
- 5.4 Contractor shall continually monitor the System Environment in order to detect and prevent issues causing the System to perform other than in accordance with the System Requirements and other Specifications. Contractor shall either deliver monthly monitoring reports or shall provide County with access to a method by which to generate such reports.
- 5.5 Contractor shall provide the services described in the Disaster Recovery Plan (Attachment F.3) for the System, including (a) ensuring Contractor's readiness to respond to and recover from a Disaster in accordance with the Disaster Recovery Plan, and (b) responding to and recovering from each Disaster occurring during the Term in accordance with the Disaster Recovery Plan (collectively "Disaster Recovery Services").
- 5.6 Notwithstanding anything to the contrary in the Service Level Requirements, with respect to any Disaster which constitutes a force majeure event under Paragraph 16.0 (Force Majeure) of Exhibit A (Additional Terms and Conditions), the System shall be deemed to be experiencing Un-Scheduled Downtime from (a) Contractor's failure to invoke the Disaster Recovery Services and/or to comply with any applicable timeframe set forth in the Disaster Recovery Plan until (b) Contractor's provision of an Interim Solution for the Downtime resulting from the Disaster, provided that (i) County thereafter approves the Interim Solution and (ii) Contractor thereafter provides a Final Resolution within the applicable timeframes set forth in Attachment F.1 (Guide to Customer Support Services). Also notwithstanding anything to the contrary in the Service Level Requirements, with respect to any other Disaster, such Disaster shall be treated as a Deficiency having a Severity Level of Critical under the applicable of Sections 4.7 and 4.8 of this Exhibit F for purposes of determining Un-Scheduled Downtime.
- 5.7 In addition to revisions made to the Disaster Recovery Plan under Section 3.9 of this Exhibit F, upon County's request, Contractor and County shall jointly review the Disaster Recovery Plan to determine whether any revisions are reasonably necessary based

upon any changes to County policies and procedures affecting the System. If the Parties determine revisions are necessary, Contractor shall make such revisions to the Disaster Recovery Plan. Upon County Project Manager's approval of the revised Disaster Recovery Plan, such revised Disaster Recovery Plan shall be deemed to update the Disaster Recovery Plan attached as Attachment F.3 for all purposes under the Agreement.

5.8 Contractor shall additionally:

1. Provide County staff access to databases and resources that contain County data (e.g., archives for ELR data feeds for various hospitals and folders representing various transformation of ELR data feeds); and
2. Ensure that the System continues to satisfy security requirements of this Agreement.

6. SCHEDULED DOWNTIME

6.1 Unless agreed to otherwise in advance by County and Contractor, Contractor shall perform installation of all Updates and Version Releases and maintenance of all System Environments, in each case, that require System Downtime during Scheduled Downtime, except as otherwise specified in Section 3.7 of this Exhibit F.

6.2 For the purpose of this Exhibit F, Scheduled Downtime shall occur daily (Mondays-Sundays) between the hours of 11:00 PM. and 3:00 AM Pacific Time (PT), unless County (through County Project Manager or otherwise) and Contractor Project Manager mutually agree in writing on a different time. Contractor may change the Scheduled Downtime window by notifying County at least three (3) calendar days' notice prior to modifying the Scheduled Downtime, subject to written approval by County Project Manager. Any System Downtime outside of the above window of time without such prior notice and County Project Manager's approval shall be considered Un-Scheduled Downtime for the duration of such System Downtime.

7. WARRANTIES

7.1 In addition to the other warranties set forth in the Agreement, Contractor represents, warrants, covenants and agrees that the System shall meet the performance warranties set forth in this Section 7.

7.2 The System shall perform in accordance with the following warranties:

System Category	Performance	System Performance Requirement
System Availability		The System shall be accessible and shall perform in accordance with the System Requirements and other Specifications 99.9% of the time, as calculated under Section 7.3.1 below.
Response Time		The elapsed time to complete (a) ninety-nine percent (99%) of transactions processed in the Production Environment by all Hard-Coded Components of the System and all

System Category	Performance	System Performance Requirement
		<p>other components of the System in their Out of the Box Configuration, shall not exceed one (1) second, and (b) the remaining one percent (1%) of transactions shall not exceed five (5) seconds.</p> <p>As used in this Section 7.2, “Hard-Coded Components” means those components of the System that are not able to be customized by the User, such as the Patient Tab, Case Investigation Tab, Supplemental Tab, Outbreak Tab, Foodborne Illness Tab, Group Event Tab, and Animal Reports Tab; and “Out of the Box Configuration” means the basic functionality of each component of the System as provided by Contractor when it is initially installed.</p> <p>This Response Time warranty shall not include (i) transactions that consist of running reports, viewing lab reports and web reports via the staging area; (ii) any time delays to the extent attributable to the County Environment, DPH Partners' networks, and the Internet, beyond the point at which Contractor's Internet service provider connects to the infrastructure of the Internet, and (iii) logging on to the System. The Response Time warranty shall be measured during times other than Scheduled Downtime.</p>

7.3 The following criteria shall be applied with regards to System performance warranties:

1. System Availability shall be calculated as follows:

$$\text{System Availability} = \frac{(\text{Total Monthly Time} - \text{Un-Scheduled Downtime})}{\text{Total Monthly Time}} \times 100$$
2. System Response Times shall be measured from the time at which the User's transaction is received by the System Environment and the System Environment provides the response up to the point at which Contractor's Internet service provider connects to the infrastructure of the Internet.
3. County from time to time may request that Contractor evaluate and report System performance relating to the agreed upon System Performance Warranties set forth in Section 7 (Warranties) of this Exhibit F (Service Level Requirements). Contractor shall so evaluate and report on the performance of

the System in accordance with a monitoring plan mutually agreed upon between County's Project Manager and Contractor's Project Manager. Any identified Deficiencies impacting the performance or operational integrity of the System or System environment will be logged within the Contractor's issue tracking system and all necessary corrective action taken to correct the performance problems in accordance with the applicable time frames required by this Exhibit F (Service Level Requirements).

4. Failure to comply with the Response Time warranty shall be considered a Deficiency under this Exhibit F, which Contractor shall remedy in accordance with Support Services.

8. CREDITS

- 8.1 With respect to any calendar month, in the event that Contractor is not able to maintain the required System Availability performance warranty outside Scheduled Downtime within such month, County shall be entitled to credits in the following amounts (expressed as a percentage of the Hosting Fees and Maintenance Fees for such month), which may be imposed at County Project Director's discretion:

System Availability Percentage	Credit
≥ 99.9% and ≥ 99.0%	No Credits
≥ 97.0% and < 99.0%	10% of monthly Hosting Fees and Maintenance Fees
≥ 96.5% and < 97.0%	20% of monthly Hosting Fees and Maintenance Fees
≥ 96.0% and < 96.5%	40% of monthly Hosting Fees and Maintenance Fees
≥ 95.5% and < 96.0%	60% of monthly Hosting Fees and Maintenance Fees
≥ 95.0% and < 95.5%	70% of monthly Hosting Fees and Maintenance Fees
< 95.0%	80% of monthly Hosting Fees and Maintenance Fees

Once County has approved Deliverable 4.5 (Implemented Amazon Web Services Infrastructure for Upgraded System) of the Statement of Work in accordance with the Agreement, the chart shown above shall be deemed to be replaced with the following:

System Availability Percentage	Credit
≥ 99.9% and ≥ 99.0%	No Credits
≥ 98.0% and < 99.0%	50% of monthly Hosting Fees and Maintenance Fees
< 98.0%	100% of monthly Hosting Fees and Maintenance Fees

8.2 UNLESS AND UNTIL COUNTY TERMINATES THIS AGREEMENT FOR DEFAULT IN ACCORDANCE WITH THE TERMS OF THIS AGREEMENT, COUNTY'S RIGHTS TO CREDITS UNDER THIS SECTION 8, TOGETHER WITH THE OTHER RIGHTS EXPRESSLY PROVIDED FOR IN THIS AGREEMENT, SHALL CONSTITUTE COUNTY'S SOLE AND EXCLUSIVE REMEDY TO ENFORCE CONTRACTOR'S OBLIGATIONS WITH RESPECT TO THE SYSTEM AVAILABILITY PERFORMANCE WARRANTY.

9. SERVICE LEVEL AUDITS

9.1 County will have the right to audit Contractor's measurement, monitoring, and reporting on all Service Levels, including providing County with access to the complete data used by Contractor to calculate its performance against the Service Levels and the measurement and monitoring procedures utilized by Contractor to generate such data for purposes of audit and verification.

ATTACHMENT F.1 GUIDE TO CUSTOMER SUPPORT SERVICES

Attachment F.1 (Guide to Customer Support Services) is attached Exhibit F (Service Level Requirements) to County Agreement No. PH-0011629 dated as of May 10, 2011 (together with all Exhibits and Attachments, the "Agreement"), by and between the County of Los Angeles, for its Department of Public Health ("County"), and Atlas Database Software Corp. d/b/a Atlas Development Corporation ("Contractor"), as amended by Amendment Number 11 dated as of _____, 2018. Capitalized terms used in this Attachment F.1 without definition have the meanings given to such terms in Exhibit F (Service Level Requirements). "Atlas" and "Contractor" are interchangeable in this Attachment F.1.

Welcome From the Technical Support Team

Atlas is dedicated to providing you and your customers with the highest level of satisfaction in our products and services.

Included in this manual is detailed information on the way our Technical Support Department assists you in optimizing usage of the Atlas products. Our goal is to facilitate communication and provide industry leading Customer Support Services.

This provides such details as: what is available, how to access it, and what levels of responsiveness Atlas shall provide.

Support Service Options

The County has elected to obtain the Standard Support, Extended Support and Holiday Support Options.

Standard Support Option

We recommend this option if you expect to submit Service Requests during regular business hours, Monday – Friday, 5:00 a.m. – 6:00 p.m. Pacific Time (PT).

Extended Support Option

We recommend this option if your site operates beyond the boundaries of the Standard Support coverage. The Extended Support plan includes after-hours and weekend support for critical issues.

Holiday Support Option

We recommend this option if your site operates on Holidays. The Holiday Support plan includes 24 hour support for critical issues for the following Holidays: New Year's Day, Presidents' Day, Memorial Day, Independence Day, Labor Day, Thanksgiving, the day after Thanksgiving, Christmas Day.

Hours of Operation

	Number of Calls	Support Hours
Standard Support	Unlimited within range of normal business hours.	5:00 am – 6:00 pm PT, Monday thru Friday, excluding the above listed Holidays.
Extended Support	Unlimited Critical Service Requests (as defined below) ¹ , outside of Standard Support hours.	Includes after-hours and weekend critical Service Requests.
Holiday Support	Unlimited Critical Service Requests.	12:00 am – 11:59 pm PT, on the above listed Holidays.

¹ See Severity Level Response/Resolution Tiers table in the Response and Resolution Times Section of this document for an understanding of Critical Severity Levels.

Guidelines

A Technical Support Specialist will troubleshoot each request for assistance under this Attachment F.1 with respect to the System (each a "Service Request") and provide solutions for issues related to the System. In the event that the Service Requests are not System related, you will be informed of the known or suspected problem.

Before submitting a Service Request, you may consider reviewing the following application product references:

- ❖ Current versions of product release notes
- ❖ Product user guides
- ❖ Installation manuals

Required Information

If you have reviewed the above references and the issue remains, be ready to provide the following information when submitting a Service Request:

- Your name, organization, site name and number.
- Any IssueTrak identification number previously assigned to, or associated with this issue.
- The product(s) and version number(s) being used.
- The error messages and the error message numbers. It may be helpful to include a screen shot of the error if possible.
 - The Severity Level of the problem underlying the Service Request based upon the business impact. The Technical Support Specialist can assist you with this assessment, but you are entitled to characterize the Severity Level. Severity Level characteristics are set forth in the Response and Resolution Times section of this Attachment F.1.
- If the problem is reproducible, have ready the steps required to reproduce it.

Optional Information

Optionally, you may wish to provide:

- Whether this Service Request is time sensitive?
- Whether your dial-in modem is set up and ready for use?
- If you will be away from your office during the day, and if so, is there an alternative contact person familiar with the problem underlying the Service Request?

Contacting Customer Support

Service Requests should be submitted through Atlas's Customer Support Services web based application, IssueTrak. IssueTrak will allow you to submit Service Requests to Technical Support, be updated on progress of the investigation and resolution, and produce service ticket reports for your site. Technical Support will provide you with an individual account as well as IssueTrak functionality training.

Due to the nature of Critical and High Severity Level Service Requests it is recommended that after entering the Service Request into IssueTrak you should telephone the Support team with your request.

Below are the Customer Support Services telephone number, fax number, and Web addresses.

Contact Information

	Telephone	Fax Numbers	Email Address	IssueTrak
	818.340.7080	818.340.7079	support@atlasdev.com	support.atlasdev.com

Reporting a Problem

Service Requests may be reported to Customer Support Services using any of the following methods.

Reporting Methods

1. **IssueTrak:** You can report Service Requests using your web browser at this web address: <https://support.atlasdev.com>. This is the preferred method of reporting most issues and requests. However, issues of a High or Critical Severity Level issues should also be telephoned in after entering the request in IssueTrak.
2. **Telephone:** When you call Customer Support Services at **818.340.7080**, you will be directed to the first available Technical Support Specialist. In the event a Technical Support Specialist is not available, your call will be recorded by the Technical Support voice mail box and returned by the next available Specialist.
3. **E-mail:** You can send in Service Requests to support@atlasdev.com using your e-mail system. Please be sure to include your name, organization, a phone number where you can be reached and a complete description of the problem. Your request will be assigned an IssueTrak incident number and you will be contacted to determine the appropriate Severity Level if you have not indicated one in the e-mail request.
4. **Fax:** You can fax Service Requests to Support at **818.340.7079**. Please be sure to include your name, organization, a phone number where you can be reached and a complete description of the problem. Your request will be assigned an IssueTrak incident number and you will be contacted to determine the appropriate Severity Level if you have not indicated one in the fax request.

Guide to Telephone Reporting

Each Service Request is logged into the incident tracking system (IssueTrak) and is assigned an incident number. Please record your incident number for future reference.

Before ending the call, please ensure that you either provide, or are aware of the Severity Level assigned to your request. The Severity Level assigned will allow the Technical Support Specialist to appropriately prioritize the problem underlying the Service Request.

If you have reported a Service Request by telephone, be sure to review the checklist below with the Technical Support Specialist before you hang up.

1. Review the Severity Level
2. Review action items for Atlas Technical Support
3. Review action items for which you are responsible
4. Confirm who is responsible for the call back and when
5. Confirm the incident number

IssueTrak

The IssueTrak product is intended to maintain all Support Service Requests, as well as patient data exchange requests.

Once a Service Request is submitted in the IssueTrak system, an email is generated to the Atlas Support team for investigation. A Technical Support Specialist will input the details of the incident and resolution into the original IssueTrak item to memorialize the actions taken and communicate the status.

Signing In to IssueTrak

IssueTrak can be accessed at <https://support.atlasdev.com/>. IssueTrak is a secure site.

In the event that IssueTrak is unavailable, use the alternate URL <https://support2.atlasdev.com/>

A user name and password are required to access IssueTrak. Your assigned Username is as follows: first initial + last name (lower case, no spaces). Please call a Technical Support Specialist for the initial password, after which you will be able to change it on succeeding logins.

Enter your user name and password and click the **Sign On** button on the IssueTrak sign in screen.

Menu Options

Once you are logged in there will be several menu options you can choose from on the left-hand side of the page. This will serve as a navigation bar and will always be present throughout your IssueTrak session.

- Home
- Submit an Issue
- Search Issues
- Lookup Issue #
- Reports
- New Sign In

Each menu option will be discussed in further detail.

Home

The home page will, by default, allow you to click on the **Show Open Issues Submitted By Me** link. This link will display all open Service Requests that you have submitted. Take note, closed requests will not appear in this search.

This page will also display the custom reports you have created. Custom reports can be created in the Search Issue page.

Submit an Issue

The Submit an Issue page will allow you to fill out the required fields and submit a new Service Request. These are the steps for submitting a request:

1. Choose a brief line to describe the incident and enter it into the **Subject** field.
2. Enter the details of the incident into the **Full Description** field. Please put as much information as possible here to avoid callbacks from the support staff requesting further information.

Relevant information would include the nature of the problem, when and where the problem occurs, the frequency of the occurrence, connection information, descriptions or screen-shots of error messages, pertinent site or patient information, etc.
3. Select an **Issue Type** from the drop-down menu to indicate the type of Service Request you are making. Issue types are as follows:
 - *Problem Report* (describes any unexpected behavior. This includes undesired behavior, error messages)
 - *Support Request* (refers to any request in the normal course of business. Examples would be data change requests, maintenance requests)
 - *Question or "How To?"*
 - *Patient Data Dump* (refers to one-time patient or demographic downloads that need to be loaded to a machine or site)
 - *Documentation Request*
 - *Change Order or Enhancement* (request for new enhancements or change in product behavior)
 - *New Release Issue* (describes problems or unexpected behavior encountered in testing a new release)
 - *Off Hours Support* (used to track support that is conducted off-hours, weekends, and holidays)
 - *Internal Request* (used to track issues originating from an Atlas employee)
4. Use the **Priority** drop-down to select the priority of the Service Request you are submitting. The default is Medium (Standard). Make another selection if necessary.
 - a. Critical
 - b. High
 - c. Medium
 - d. Low
5. **Development Issue Number** and **Issue Status** are used for internal tracking purposes and will be filled out by the support analyst assigned to the issue. Issue Status will give you a general idea of where in the incident life cycle your issue stands.
6. Select the **Include Attachment** button for screen shots, data files, documents, or anything else that may need to be included with the Service Request.
7. Click the **Submit Issue** button. The incident number assigned to the Service Request will be then be displayed. This option will take you to the Add Attachments form upon submission of the request.

Search Issues

The **Search Issues** link will take you to a search page that allows you to enter filter criteria by which you can search your Service Requests. Enter values in these fields to narrow your search, or leave them blank to view all incidents (open and closed) ever submitted for your organization. Click the **Search** button to trigger the search.

The **Output** method can be changed towards the bottom of the page, and an Excel sheet can be generated based on the search. Likewise, the **Sort Order** can be manipulated to better format your report.

Searches can be saved as custom reports by choosing a **Report Title**, and clicking **Save as New Report**.

Lookup Issue #

Lookup Issue # option can be used when you know the exact incident number. This will take you to the Issue Detail – View Issue page.

Issue Detail

When an issue is pulled up, additional options will appear in your navigation bar.

- View Issue – brings up all the incident details.
- Add Note to Issue – allows you to add notes to the incident.
- Attachments – allows you to view and add new attachments
- Lookup Issue by # - sends you back to the Lookup Issue by # page.

Reports

The Reports page contains a listing of all custom reports you have created and saved. Custom reports can be created in the **Search Issue** page. If you would like assistance creating reports specific to your day to day needs please contact a Technical Support Specialist for guidance.

New Sign In

Allows you to log out of IssueTrak, and takes you back to the Sign-In page.

Additional Information

Support staff will periodically add notes to this incident to memorialize the actions taken. You also have this ability, and it is recommended that this functionality be used freely and often in order to properly build an incident history.

You will be able to search and view incidents other people in your organization have submitted. You will be notified of changes and updates to any incidents you have submitted via email. Contact the support staff if you would like to be set up with additional automated email notifications, for incidents that were not submitted by you.

Enhancement Requests

You may use IssueTrak or any of the methods mentioned above to submit enhancement or change requests. Each enhancement request is forwarded to the Development Department for analysis. Upon completion of the analysis, a the applicable of a Change Order or Amendment may be prepared in accordance with the Base Agreement. The Change Order or Amendment will be provided to you for review and approval in accordance with the Base Agreement. An example of the Change Order Form follows.

Change Order Form (follows)



CHANGE ORDER

Atlas C.O. #

Atlas Product:

Client: Los Angeles County

Change Order Title:

Change Order Edit History (record any changes to this document by making an entry for each new version)

Date	Author(s)	Revision Comments

Requirements / Business Need (what is needed & why; include relevant workflow and UI implications)

Needs thick client deployment? Yes No

Proposed Solution (description of solution that would be provided)

Solution Prerequisites/Dependencies:

Anticipated Delivery (how and when would the solution be delivered)

Delivery Via Retrofit / Patch or Interface
 If Yes, Specify Version: _____
 Delivery Via Future Version / Upgrade

Signature Timeframe: _____ Delivery Timeframe: _____
 Signature Timeframe: _____ Delivery Timeframe: _____
 Signature Timeframe: _____ Delivery Timeframe: _____

Fixed Price for Completion

Quoted Price:
 (#of hour @ \$____)
 Fixed Price or Not to Exceed Time and Materials
 Approved¹: _____

Includes the following:

- Investigation / Analysis
- Design / Development
- Quality Assurance Testing
- Implementation
- Project Management

Payment Terms

If on a fixed price basis, payment terms are as follows:

Twenty-five percent (25%) of the fixed price payable upon County's approval of the System Requirements and other Specifications in accordance with this Agreement;

Fifty percent (50%) of the fixed price payable after Contractor's delivery of a version of the software and/or system to be developed pursuant to the Additional Work deemed ready by Contractor for all associated testing; and

Twenty-five percent (25%) of the fixed price payable after County's approval in accordance with this Agreement of successful completion of all associated testing of the software and/or system developed pursuant to the Additional Work and the software and/or system is migrated to the Production Environment, unless County delays migration to the Production Environment for greater than sixty (60) days from the date on which Contractor notifies County in writing of the successful completion of all associated testing of the software and/or system developed pursuant to the Additional Work and the software and/or system is ready to be migrated to the Production Environment, in which case such payment shall then become payable by County. County shall thereafter be entitled to reverse the payment (including through credit to other payments owed to Contractor under this Agreement) if once County is ready to migrate such Additional Work to the Production Environment, such Additional Work is not able to successfully complete County testing.

Client Authorization – Please Sign and FAX to 818.337.0323

I hereby authorize Atlas Development Corporation to proceed as outlined in this Change Order. I have read and agree with the estimate for completion and payment terms. I understand that when this Change Order is signed it shall become part of the existing Agreement with Atlas and shall be governed by the terms and conditions of that Agreement.



CHANGE ORDER

Atlas C.O. #

Atlas Product:

Client: Los Angeles County

Change Order Title:

Name / Title
(printed):

County Project Director

Signature:

Date:

Name / Title
(printed):

DPH Chief Information Officer

Signature:

Date:

¹ Manager signature required for N/C or amounts less than \$950.

Diagnosing Issues

To thoroughly investigate a Service Request, the Technical Support Specialist may request permission to dial in to your system. Please be prepared to provide the necessary modem numbers and passwords to accomplish this task.

You may also be asked to provide the Technical Support Specialist with copies of the programs, relevant screen shots, and data files as may be reasonably requested, as well as sufficient support and test time on your computer system. If the problem cannot be reproduced, the Technical Support Specialist will make a good faith effort to identify a workaround until the problem can be reproduced and ultimately corrected.

Deficiency Resolution

If a Service Request is determined to be a Deficiency during the diagnostic process, it will be sent to the Development Department for further analysis and correction. The Technical Support Specialist will check for an existing software correction and will make arrangements with you to install it.

All Deficiencies shall be resolved within the applicable timeframes set forth in the Response and Resolution Times section of this Attachment F.1. You will also be provided with details on when the Deficiency will be permanently addressed by Development.

You may call Technical Support at any time, reference the incident number, and ask for the current status of the Deficiency resolution.

Escalating an Incident

You may escalate a Service Request whenever you feel that Atlas Technical Support is not providing the level of attention you believe is warranted. When escalating a Service Request, be sure to reference the incident number in all communication.

To escalate Service Request, please call and ask to speak with the Technical Support Manager. If the manager is unavailable, please leave a message and he or she will respond as soon as possible to discuss the situation and work with you to create a plan to resolve the incident.

If you have not received a timely response from the Technical Support Manager, please contact the Director of Customer Services or the Vice President of Client Services.

Response and Resolution Times

When you assign a Severity Level for a Service Request, you are also agreeing to the specified response and, if applicable, resolution times that coincide with the incident. The grid below summarized the relationship between each Severity Level and the response/resolution times.

The response time and Interim Solution resolution time starts tolling from the earlier of (a) County's report of the Service Request in accordance with this Attachment F.1 and (b) Atlas' other knowledge of the Deficiency (referred to in this Attachment F.1 as "Report"). The methodology for the calculation of Un-Scheduled Downtime is set forth in Exhibit F.

County may escalate or downgrade a Severity Level of a Deficiency if the Deficiency meets the definition of the Severity Level as escalated or downgraded. A Deficiency may also be escalated by County if the Deficiency persists or re-occurs to warrant an escalated Severity Level, as determined by County Project Manager. Notwithstanding anything to the contrary contained in this Attachment F.1 or the Agreement, County and Contractor may, upon Contractor's request, downgrade the Severity Level of a Deficiency if such Deficiency was incorrectly classified or if following the provision of a workaround or other action of Contractor such Deficiency warrants a downgraded Severity Level. At the time a Deficiency is escalated or downgraded, an appropriate timeline will be applied for resolution of such Deficiency in accordance with this Attachment F.1.

As used in this Attachment F.1, the following terms have the following meanings:

Final Resolution means a correction or modification of the System that corrects the Deficiency or resolves the Support Issue.

Holiday means New Year's Day, Presidents' Day, Memorial Day, Independence Day, Labor Day, Thanksgiving, the day after Thanksgiving, and Christmas Day.

Interim Solution means Atlas: (a) reinitiates or restarts, as applicable, the System, if the reported Deficiency caused the System to be inoperative; (b) enables the client to access the System, if the reported Deficiency caused client to be unable to access the System; or (c) provides client with an acceptable workaround that solves or mitigates a reported Deficiency, which workaround can be provided with minimal client inconvenience.

Problem Analysis means a fax, e-mail or telephone call from Atlas (1) acknowledging that a Service Request has been received and that appropriate technical personnel have been assigned to work on underlying problem, (2) providing details on what Atlas has learned about the problem as of the time of communication, and (3) detailing Atlas' initial analysis of and, if applicable, action plan for resolving the reported Deficiency.

Response means a fax, e-mail or telephone call from Atlas to a support client acknowledging that an incident has been reported.

Support Day means (a) with respect to Service Requests with a Severity Level of Critical, each day of the week including Holidays; and (b) with respect to all other Service Requests, Monday through Friday other than Holidays.

Support Hour means (a) with respect to Service Requests with a Severity Level of Critical, each hour of a Support Day; and (b) with respect to all other Service Requests, each hour between 5 AM and 6 PM Pacific Time of a Support Day.

Support Issue means any problem that is not a Deficiency.

Support Minute means a minute of a Support Hour.

The chart follows on next page.

Severity Level Response/Resolution Tiers

Severity Level	Contact Method	Service Request Definition	Response	Problem Analysis	Interim Solution	Final Resolution
Critical	IssueTrak followed by Telephone	Includes any Deficiency that renders the System or System functionality, the loss of which causes significant business impact to the client, completely inoperative due to a failure to operate in accordance with the applicable System Requirements and other Specifications. Examples of System functionality, the loss of which causes significant business impact to the client, are that the User is unable: (a) to create a new incident or outbreak report; (b) to import disease incident information from the staging area; (c) to import food borne illness complaints form the web; or (d) to modify, update, or save a record.	Immediate if received during Standard Support hours. Thirty (30) minutes following Report for Extended Support and Holiday Support hours.	Two (2) hours following Report.	Four (4) hours following Report.	Within two (2) calendar days following Interim Solution.
High	IssueTrak followed by Telephone	Includes any Deficiency that significantly impacts client's ability to use the System or any System functionality, the loss of which causes significant business impact to the client, because of operational, functional or informational Deficiencies that arise from the System Software's failure to operate in accordance with the applicable System Requirements and other Specifications.	Immediate if received during Standard Support hours. Thirty (30) minutes following Report for Extended Support and Holiday Support hours.	Four (4) hours following Report.	Within twenty-four (24) hours following Report.	Within ten (10) calendar days following Interim Solution.
Med-ium	IssueTrak, telephone, e-mail, or fax	Includes any Deficiency that adversely affects the System such that the System is prevented from operating in accordance with the applicable System Requirements and other Specifications.	One (1) hour of Report, if received during Standard Support hours.	Five (5) business days following Report.	Within ten (10) business days following Report.	Next scheduled Update/Versi on Release.

Severity Level	Contact Method	Service Request Definition	Response	Problem Analysis	Interim Solution	Final Resolution
Low	IssueTrak, telephone, e-mail, or fax	Includes any Deficiency that minimally affects the System.	One (1) hour of Report if received during Standard Support hours.	Within ten (10) business days following Report.	Within twenty (20) business days following Report.	Next scheduled Update/Version Release.

ATTACHMENT F.2

ELECTRONIC LABORATORY REPORTING (ELR) Maintenance and Support Guide

Guideline that will help you to determine “who to call” or “where to go” in case any problems are encountered during production related to your ELR.

Three (3) Levels of support exist for L.A. County hospitals participating in the Los Angeles County Department of Public Health’s (LACDPH) ELR program

Level I Support: LACDPH Public Health Laboratory (PHL)

The first level of support is a local hospital or lab staff member who has been trained in using tools that manage the ELR network. The components of that toolset include ELR Gateway server and the software it runs. Among the software and functions are as follows: (1) The Atlas LabAware engine (formerly known as Public Health Interface Link) that standardizes your outbound lab results messages to the Public Health Information Network (PHIN) compliant HL7 format, (2) determines first level of reporting to decide which results to send to public health, (3) sends you alerts for submitted results which may have errors, (4) provides automated ways to correct those errors, and (5) provides a full audit trail (repository of all results received) to use for local infection control efforts or other purposes as you your facility may wish. Other software products on the ELR Gateway provide for automated communication management (Atlas Connect). Atlas Connect is a communication engine that can rapidly redirect messaging in the event of failure of the central site.

Name	Title	Phone	Email
Joan Sturgeon	Microbiology	562-658-1354	jsturgeon@ph.lacounty.gov
Robert Tyler	Med Technologist, Lab info	562-658-1346	rotyler@ph.lacounty.gov
Sheena Chu	PH Micro Sup I	562-658-1310	schu@ph.lacounty.gov
David Jensen	PH Micro Sup II	562-658-1488	djensen@ph.lacounty.gov
Nicole (Nikki)	PH Lab Director	562-658-1352	nicgreen@ph.lacounty.gov

Level II Support: Los Angeles County (LAC) ELR Support Teams:

The second level of support is the professional staff at LACPH. LACPH subject matter experts (SME) from Acute Communicable Disease Control (ACDC), Division of HIV and STD Programs (DHSP), Tuberculosis Control Program (TBCP), Vaccine Preventable Disease Control (VPDC), and Veterinary Public Health (VPH) can help with any issue that can't be resolved by your local support staff. They can answer questions regarding reporting practices, results encoding whether Logical Observation Identifiers Names and Codes (LOINC) or Systematized Nomenclature of Medicine (SNOMED) codes and other issues related to coding. They can also answer questions regarding the operation of your ELR Gateway and its various software components as well as assist with communication and other technical issues.

Name	Title	Phone	Email	Specialty
Hyung-Suk "Sue" Lee	ACDC Laboratory Data Analyst	213 989-7206	hylee@ph.lacounty.gov	ELR Project Management, Results analysis, ELR Validation, SME, HL7/LOINC/SNOME D, Atlas IssueTrak Submitter
Kelly Chung	ACDC Laboratory Data Analyst	213-989-7218	kchung@ph.lacounty.gov	Results analysis, ELR Validation, SME, HL7/LOINC/SNOME D, Atlas IssueTrak Submitter
Keilina Lu	ACDC Laboratory Data Analyst	213-288-7176	Kl@ph.lacounty.gov	Results analysis, ELR Validation, SME, HL7/LOINC/SNOME D, Atlas IssueTrak Submitter
Irene Culver	ACDC IRIS Technical Lead	213-250-8680	iculver@ph.lacounty.gov	Project Management, Administrative, Policy, Financial and related issues (contracts), Atlas IssueTrak Submitter
Crystal Boateng	ACDC IRIS Technical Support	213-288-7040	Cboateng2@ph.lacounty.gov	Results analysis, ELR Validation, Login Problems, Atlas IssueTrak Submitter
Yushan Tong	ACDC Admin Support	213-989-7208	ytong@ph.lacounty.gov	Administrative, Financial and related issues (contracts)
Ben Tech	ACDC Admin Support	213-989-7201	bttech@ph.lacounty.gov	Administrative, Financial and related issues (contracts)
Mike Janson	DHSP Project Management	213-351-8189	Mjanson@ph.lacounty.gov	Administrative, Financial and related issues (contracts)
Amy Chen	DHSP (STD)	213-639-4313	Amychen@ph.lacounty.gov	ELR Validation, UDF development, Atlas IssueTrak Submitter
Julius Lim	DHSP (STD)	213-639-4317	Jlim@ph.lacounty.gov	ELR Validation

Name	Title	Phone	Email	Specialty
Cizao Ren	DHSP (HIV)	213-368-7420	camagana@ph.lacounty.gov	ELR Validation, Results Analysis, Atlas IssueTrak Submitter
Kai-Jen Cheng	TBCP	213-745-0837	kcheng@ph.lacounty.gov	TB Project Management, Results analysis, IssueTrak Submitter, SME
Edward Lan	TBCP	213-745-0800	elan@ph.lacounty.gov	Results analysis, SME, UDF development, Atlas IssueTrak Submitter
Melanie Barr	VPDC	213-351-7427	mbarr@ph.lacounty.gov	Results analysis, SME
Emmanuel Mendoza	VPDC	213-351-7489	Emmendoza@ph.lacounty.gov	Results analysis, SME, Atlas IssueTrak Submitter
Dulmini Wilson	VPDC	213-351-7482	duwilson@ph.lacounty.gov	Results analysis, SME, Atlas IssueTrak Submitter
Jamie Middleton	VPH	213-989-7060	jmiddleton@ph.lacounty.gov	VPH Project Management, SME
Askari Addison	VPH	213-989-7060	Aaddison@ph.lacounty.gov	Results analysis, ELR Validation

Level III Support: Atlas Development ELR Support Team
(Please Note Level 3 Support must be initiated by LAC)

The third level of support occurs when LACPH is unable to move a problem readily to resolution. If a problem cannot be solved by LACPH staff, LACPH will open an issue in Atlas Development's issue-tracking system. Atlas Development is the software vendor that developed and supports LabAware ELR Gateway and Atlas Connect. LACPH can open an issue online and/or directly contact support staff within Atlas to address the problems. Problems range from low priority to highly critical. Once the issue is opened, you may receive a call from technical support to diagnose the issue, run some tests, or perform other actions. Once an issue is opened, it remains open until a solution or workaround is provided. For ELR support, Atlas must be brought into the support cycle by LACPH staff.

ATTACHMENT F.3

Disaster Recovery Plan

Prepared for:
Los Angeles County
Department of Public Health

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1 Document Revision History

Version	Date	Author	Revision Notes
1.1	2/1/2018	Gwen Bell	Initial edits to existing doc

2 Document Distribution List

This document is to be distributed to the following stakeholders as:

I – Information only

R – Reviews content and provides input

A – Reviews and approves document

Name & Role	Type	Review Purpose
David Cardenas	A	
Irene Culver	A	
Gwen Bell	R	
Russell von Blank	R	
James Corlew	R	
John Titus	R	

3 Purpose

The purpose of this Disaster Recovery Plan is to provide business continuity for the Los Angeles County Department of Public Health IRIS system in the event of a disaster which stops all Production activities in the Calabasas data center.

4 Overview

This document briefly describes and defines an Adverse Operation (AOS) event and the corresponding service level agreement for restoring services in the event of an unrecoverable disaster at the Primary Atlas Data Center in Calabasas, CA.

AOS event has the same meaning given to the term "Disaster" in Exhibit F (Service Level Requirements). "AOS event" and "Disaster" are interchangeable in this Disaster Recovery Plan.

5 Roles and Responsibilities

Resource	Role	Contact Information
James Corlew	Atlas Technical Coordinator	818-224-6233 jcorlew@atlasdev.com
Gwen Bell	Atlas Communication Coordinator	818-224-6202, 818-402-8308 gbell@atlasdev.com
John Titus	Atlas Support	818-224-6291, 805-340-8212 jtitus@atlasdev.com
Irene Culver	LAC Communication Coordinator	213-288-8680, 213-840-9068 iculver@ph.lacounty.gov
Patricia Araki	LAC Communication Coordinator	213-288-7267, 323-236-6096 paraki@ph.lacounty.gov

6 Service Level Agreement

It is understood that certain functional modules within the System Software are required for the System Environment to be minimally operational. Other functional modules, while necessary for complete System Environment functionality, are not necessary to render the basic System Environment minimally operational.

6.1 Core Functional Modules

The following functional modules are considered necessary for the System Environment to be minimally operational (collectively the “Core Functional Modules”):

- WorldCare Product Suite

6.2 Non-Core Functional Modules

The following functional modules are not necessary for the System Environment to be minimally operational, but are nonetheless part of the System Environment and are required for the system environment to be fully operational (collectively the “Non-Core Functional Modules”):

- Atlas Connect/SFTP
- Syndromic
- VPN Connections

6.3 Recovery Points

6.3.1 Core Functional Modules

All Core Functional Modules shall have a successful “snapshot” taken and updated no less frequently than every four (4) hours such that all Core Functional Modules shall have no more potential data loss than the last four (4) hours. This represents the Core Functional Module Recovery Point.

6.3.2 Non-Core Functional Modules

Atlas Connect/SFTP shall have a successful “snapshot” taken and updated no less frequently than every twenty-four (24) hours. These timeframes represent the Non-Core Functional Module Recovery Points. Other Non-Core Functional Modules not mentioned in this paragraph do not have an applicable Recovery Point.

The Recovery Point for Atlas Connect/SFTP will comprise solely of configuration data pertaining to a new laboratory and shall not include transactional data. Moreover, the Recovery Time pertains only to having an operational Functional Module and does not cover the ability of the laboratory to redirect their traffic to a new facility.

VPN Connections require the engagement of third party trading partners that have no obligation under this Disaster Recovery Plan and shall be independently negotiated.

6.4 Recovery Time

With the exception of VPN Connections, Contractor shall bring all Core Functional Modules and Non-Core Functional Modules of the System Environment back to an operational state within eight (8) hours from the time when a Disaster is declared (the "Recovery Time").

6.5 Service Level Matrix

Based on the foregoing, the following Service Level Matrix shall apply to restoration and business continuity efforts in the event of an AOS.

Functional Module	Is Core ¹	Recovery Point (hrs) ²	Recovery Time (hrs) ³
WorldCare Product Suite	Yes	4	8
Atlas Connect/SFTP ⁴	No	24	8
Syndromic ⁵	No	N/A	8
VPN Connections ⁶	No	N/A	N/A

¹ Is Core represents whether this Functional Module is required to be operational in order to provide a minimal operational state of the System Environment.

² Recovery Point represents the hours of potential data loss since the last successful "snapshot."

³ Recovery Time represents the hours required to fully bring the Functional Module back to an operational state *from the time when a disaster is declared*.

⁴ The Recovery Point for Atlas Connect/SFTP will comprise solely of configuration data pertaining to a new laboratory and shall not include transactional data. Moreover, the Recovery Time pertains only to having an operational Functional Module and does not cover the ability of the laboratory to redirect their traffic to a new facility.

⁵ All data that resides on the Syndromic Servers within the Calabasas data center is downloaded by DPH personnel and stored upon a server within DPH.

⁶ VPN Connections require the engagement of third party trading partners that have no obligation under this Disaster Recovery Plan and shall be independently negotiated.

Under Task 4 - (Migration to System Environments in Amazon Web Services Infrastructure) of Exhibit B (Statement of Work), this Disaster Recovery Plan will be updated by the Parties to reflect the migration of IRIS to new System Environments within the Amazon Web Services hosting infrastructure. Among the changes to be made to this Disaster Recovery Plan is to update the Service Level Matrix in this Section 6.5 as follows:

Functional Module	Is Core ¹	Recovery Point (hrs) ²	Recovery Time (hrs) ³
WorldCare Product Suite	Yes	2	4
Atlas Connect/SFTP	No	4	8
Syndromic	No	N/A	8

VPN Connections	No	N/A	N/A
-----------------	----	-----	-----

7 Disaster Recovery Readiness

The following section describes the System components as well as the processes and procedures that will be put in place in order to maintain redundant and failover capabilities and ensure business continuity in the event of a Disaster.

7.1 Hardware Configuration

The following hardware components will be installed and configured at the Disaster Recovery (DR) site:

- **Web Server:** this server will act as the web server for WorldCare Product Suite.
- **Database Server:** this server will act as the database server for WorldCare Product Suite.
- **Communication Server:** this server will receive live data from ELR clients while the DR site is operational after the laboratories redirect their traffic to the DR facility.
- **Syndromic File Server:** this server will receive files from hospitals that participated in the Syndromic project after the hospitals redirect their traffic to the DR facility.

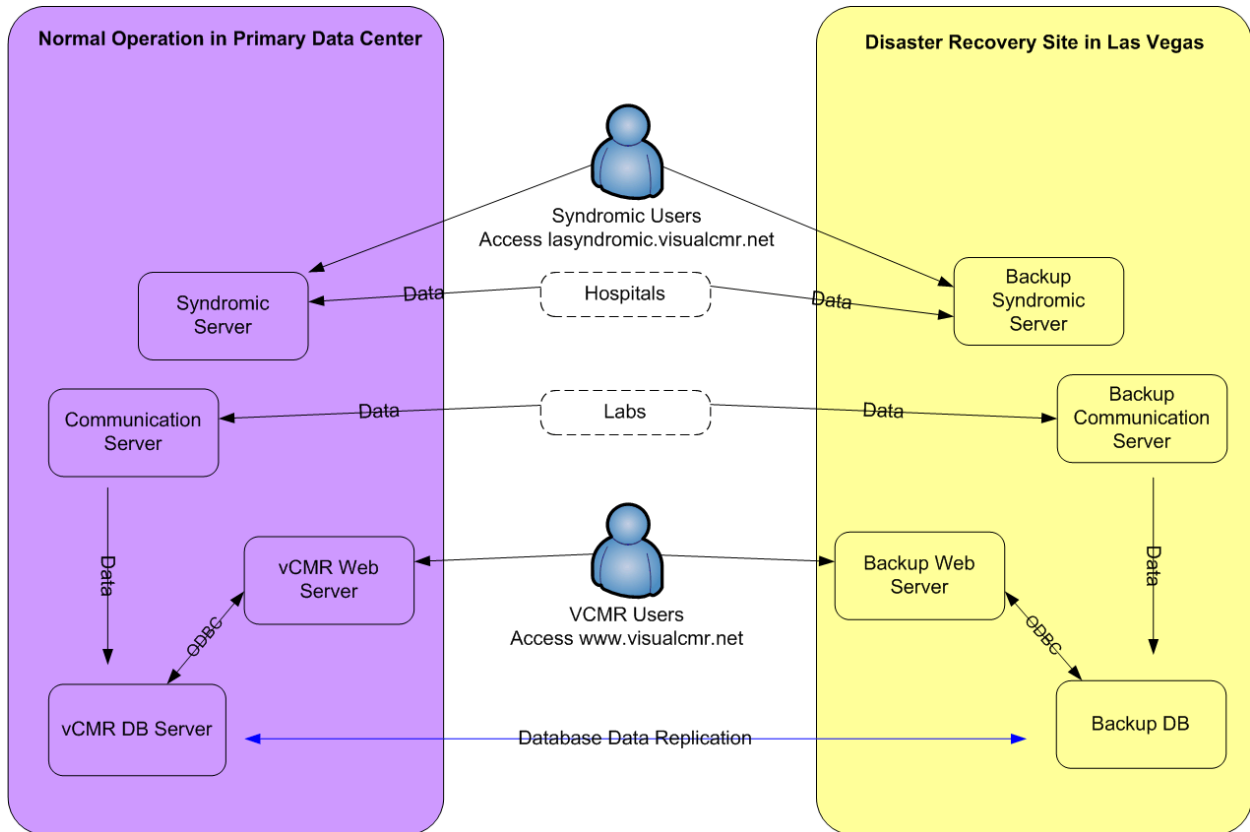
7.2 Software Configuration

The following software components will be installed and configured at the DR site:

- **WorldCare Product Suite Websites:** The Web Server in the DR site will host copies of the most current websites for WorldCare Product Suite. These websites will be upgraded manually whenever there is a change in the Production site. A URL will be assigned to the WorldCare Product Suite sites in the DR site.
- **LabAware Database:** The LabAware database will be mirrored to the Las Vegas DR site as changes occur. Atlas will maintain a connection that will allow the mirroring to remain within the 4-hour recovery point agreed on.
- **AtlasConnect/SFTP:** The AtlasConnect and SFTP Server components will be installed on the Communication Server in the DR site and configured to receive data.
- **AtlasConnect Client:** The AtlasConnect Client will be installed on the Database Server in the DR site and configured to pull data from the Communication Server.
- **WorldCare Product Suite database:** The WorldCare Product Suite database will be mirrored to the Las Vegas DR site as changes occur. Atlas will maintain a connection that will allow the mirroring to remain within the 4-hour recovery point agreed on.

- **Botmanager:** The database server in the DR site will host copies of the most current Botmanager configuration in Production. The Bot Manager configuration will be copied manually whenever there is a change in the Production site.
- **Syndromic Server:** The Syndromic server in the DR site will have an identical SFTP Server and socket connections as the live Syndromic Server. A Web Server will be available at the DR site for LA County to upload its Syndromic data.

7.3 System Diagram



7.4 System Monitoring

- All servers at the Las Vegas DR site will be monitored by an automated system that sends real-time email alerts in the event of critical issues such as hard drive failures and disc space issues.
- Database replication service between the live Database Server and the DR Database Server will be monitored hourly.
- Atlas will verify once every three (3) months that the WorldCare Product Suite website versions and configurations in the DR site are consistent with the Production site.

- Atlas will verify once every three (3) months that the configuration and data in GASA, AtlasConnect, Bot Manager, and SFTP in the DR site matches the Production site.
- Atlas will verify once every three (3) months that the SFTP and socket configuration on the Syndromic Server in the DR site is consistent with the Production site.
- Antivirus software on all Las Vegas servers will be consistently monitored by an automated system.

8 Response Plan

The following section describes the response plan steps that must be followed in the event of a Disaster.

8.1 Transition of WorldCare Product Suite activities to DR site

Task #	Responsible Person	Task Description	Time (hrs)
1	LA County (LAC) and Atlas Communication Coordinators	In the event of a Disaster, the Atlas and LAC Communication Coordinators will attempt to establish contact over any means available (phone, email) in order to discuss whether the response plan must be put into effect.	1
2	Atlas Communication Coordinators	In the event that communication cannot be established with LA County, Atlas will move forward with the response plan as it deems necessary based on expected System downtime.	
3	Atlas Technical Coordinator	Firewall check list: <ol style="list-style-type: none"> 1. Ensure that ports 443, 1433, 1972, and ICMP are open for the live Web Server to access the Database Server. 2. Ensure that the public IP addresses assigned to the live Web Server and Communication server are working properly. 3. Verify that the client VPN works normally for the LA County users to establish the SSL VPN to access the data in the live Database Server. 	0.5

4	Atlas Technical Coordinator	<p>Communication Server check list:</p> <ol style="list-style-type: none"> 1. Verify that the AtlasConnect Server can receive data. 2. Verify that the SFTP server can receive data. 3. Verify that HyperSend is working. 4. Verify that the antivirus program is functional and up to date. 	0.5
5	Atlas Technical Coordinator	<p>Web Server check list:</p> <ol style="list-style-type: none"> 1. WorldCare Product Suite website – ensure that the software version is current. 2. SMTP server – send a test email to confirm the SMTP server works. 3. Verify that the Antivirus program is functional and up to date. 	0.5
6	Atlas Technical Coordinator	<p>Database Server check list:</p> <ol style="list-style-type: none"> 1. AtlasConnect client – verify that the client can pull data. 2. LabAware – ensure that the software version is current. 3. Verify that the file monitoring script is set in Windows scheduled tasks. 4. Verify that the antivirus program is functional and up to date. 	0.5
7	Atlas Technical Coordinator	Update the Domain Name System (DNS) entry to redirect www.visualcmr.net and integration.visualcmr.net to the Web Server and ELRCom Server in the Las Vegas DR site.	1 (DNS propagation may take 24 hours to complete)
8	Atlas Technical Coordinator	Copy and restore the Shadow Database Servers in the Las Vegas DR site to function as a fully operational Database Server for WorldCare Product Suite.	1
9	Atlas Technical Coordinator or Atlas Support	Test access to WorldCare Product Suite in the DR site by logging in and reviewing the message monitor.	0.5

10	LA County User	<ol style="list-style-type: none"> 1. Test access to WorldCare Product Suite in the DR site by logging in and reviewing the message monitor. 2. FTP server. LA County users will establish the SSL VPN to test if they have access to the FTP server of the database server for accessing the archived ELR data. 	0.5
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8.2 Transition of Syndromic activities to DR site

Task #	Responsible Person	Task Description	Time (hrs)
1	LA County and Atlas Communication Coordinators	In the event of a Disaster, the Atlas and LAC Communication Coordinators will attempt to establish contact over any means available (phone, email) in order to discuss whether the response plan must be put into effect.	1
2	Atlas Technical Coordinator	Firewall Checklist: <ol style="list-style-type: none"> 1. Ensure that port 443 is open for users to access the Syndromic website. 2. Ensure that the public IP address assigned to the Syndromic server is working properly. 	0.25
3	Atlas Technical Coordinator	Syndromic Web Server Checklist: <ol style="list-style-type: none"> 1. SFTP server – test if the server can receive data. 2. Socket Connection – test if the socket connections are ready to receive data. 3. Webserver – make sure that IIS7 is installed. 4. Verify that the antivirus program is functional and up to date. 	0.25
4	Atlas Technical Coordinator	Update the DNS entry which redirects the URL for lasyndromic.visualcmr.net	0.5 (DNS propagation may take 24

		to use the IP address of the Syndromic Server in DR site.	hours to complete)
5	Atlas Technical Coordinator	Notify LA County when the server is ready and accessible via email or phone.	0.5
5	LA County User	Upload the content of the Syndromic website to the DR server.	1
6	Atlas Technical Coordinator	Contact all hospitals that participate in Syndromic project to rebuild the VPNs and reconfigure the socket connections to send the data to the DR site.	n/a

9 Readiness Testing

In addition to the regular monitoring activities, Atlas will perform Readiness Testing of the DR site every six (6) months. Readiness Testing is the process by which the Atlas Technical Coordinator tests all components (servers and software) of the DR site and verifies that they are synchronized with the live site and ready for Production use in the event of a Disaster.

The following tasks will be performed during each Readiness Testing cycle:

Task #	Responsible Person	Task Description
1	Atlas Technical Coordinators	Verify that the message monitor in the WorldCare Product Suite displays data that is no older than four hours from the live system.
2	Atlas Technical Coordinators	Verify that the GASA address update is current.
3	Atlas Technical Coordinators	Test AtlasConnect software on the Communication Server and Database Server in the Disaster Recovery Site.
4	Atlas Technical Coordinators	Verify that the Food Borne Illness (FBI) webpage on the DR site is accessible to users.
5	Atlas Technical Coordinators	Test upload of data through SFTP to the Communication Server in Disaster Recovery Site.
6	Atlas Technical Coordinators	Test upload of data through SFTP to the Syndromic Server in Disaster Recovery Site.

10 Disaster Recovery Approval

[FOLLOWS]

(Contractor Name and Address) Atlas Development Corporation 26679 West Agoura Road, Suite 200, Calabasas, CA 91302		TRANSMITTAL DATE
DELIVERABLE ACCEPTANCE FORM		AGREEMENT NAME Software and Services Agreement
		COUNTY CONTRACT NUMBER PH-0001629
FROM: <i>Contractor Project Director</i> Name: Gwen Bell _____ (Signature Required)	TO: <i>County Project Director</i> Name: David Cardenas	
Contractor hereby certifies to County that as of the date of this Deliverable Acceptance Form, it has satisfied all conditions precedent in the above Agreement (including the Exhibits and Attachments thereto and any executed Change Orders or Amendments) to the completion of the Work described below, including satisfaction of all completion criteria applicable to such Work (including obtaining County's approval of any other Work which is a prerequisite to obtaining County's approval of the Work described below). Contractor further represents and warrants that the Work described below has been completed in accordance with the Agreement, including the Exhibits and Attachments thereto and any executed Change Orders and Amendments. County's approval and signature constitutes an acceptance of the Work described below. Capitalized terms used in this Deliverable Acceptance Form without definition have the meanings given to such terms in the Agreement.		
TASK DESCRIPTION Exhibit B - Statement of Work Task 4 – Updated Disaster Recovery Plan and Assessments for the Upgraded System	DELIVERABLE DESCRIPTION Updated Disaster Recovery Plan and Assessments Subtask 4.6 – Updated Disaster Recovery Plan and Assessments for the Upgraded System on the Amazon Web Services Infrastructure	OTHER WORK DESCRIPTION
Comments:		
Attached hereto is a copy of all supporting documentation required pursuant to the Agreement, including the Exhibits and Attachments thereto, and any executed Change Orders and Amendments, and including any additional documentation reasonably requested by County.		
COUNTY <input type="checkbox"/> APPROVAL OR <input type="checkbox"/> DISAPPROVAL IF DISAPPROVAL, CORRECTIVE ACTION REQUIRED: _____ _____ _____ _____		
NAME: _____ TITLE: County Project Director SIGNATURE: _____ DATE: _____		

EXHIBIT Q INFORMATION SECURITY REQUIREMENTS

This Exhibit Q (Information Security Requirements) is an attachment to that certain Software and Services Agreement, County Agreement No. PH-001629, dated as of May 10, 2011 (together with all Exhibits and Attachments, all as amended in accordance with the terms thereof, the "Agreement"), by and between the County of Los Angeles, for its Department of Public Health ("County"), and Atlas Database Software Corp. d/b/a Atlas Development Corporation ("Contractor") and is incorporated into the Agreement by reference hereof.

This Exhibit Q sets forth information security procedures established by Contractor and maintained throughout the term of the Agreement. These procedures are in addition to the requirements of the Agreement, including Exhibit G (Business Associate Agreement Under the Health Insurance Portability and Accountability Act of 1996 ("HIPAA")) thereto. The County in no way warrants the requirements set forth in this Exhibit Q are appropriate for Contractor to secure its systems and data and to address ongoing threats and risks. It is Contractor's obligation to: (i) implement appropriate measures to secure its systems and data, including Personally Identifiable Information (as further defined in this Exhibit, hereinafter "PII"), Protected Health Information (as further defined in this Exhibit, hereinafter "PHI"), Medical Information (as further defined in this Exhibit, hereinafter "MI") and County's other Confidential Information, against internal and external threats and risks; and (ii) continuously review and revise those measures to address ongoing threats and risks.

Failure to comply with this Exhibit Q will constitute a material breach of the Agreement by Contractor upon which County shall be entitled in addition to and cumulative of all other remedies available to it at law, in equity, or under the Agreement, to terminate the Agreement in accordance with Paragraph 5.1 (Event of Default – Contractor) of Exhibit A (Additional Terms and Conditions) to the Agreement. Unless specifically defined in this Exhibit Q, capitalized terms shall have the meanings set forth in the Agreement.

1. SECURITY PROGRAM

Contractor shall establish and maintain a formal, documented, mandated, company-wide Information Security Program, including security policies, standards and procedures and security controls. The Information Security Program will be communicated to all Contractor personnel in a relevant, accessible, and understandable form and will be regularly reviewed and evaluated to ensure its operational effectiveness, compliance with all applicable laws and regulations, and to address new threats and risks.

2. CONTRACTOR PROTECTIONS

All agreements with third parties involving access to Contractor's systems and data, including all outsourcing arrangements and maintenance and support agreements (including facilities maintenance), shall specifically address security risks, controls, and procedures for information systems. Contractor shall supply each of its personnel with appropriate, ongoing training regarding information security policies, procedures, risks, and threats. Contractor shall have an established set of procedures to ensure Contractor personnel promptly report actual and/or suspected breaches of security.

3. PROTECTION OF ELECTRONIC COUNTY INFORMATION – DATA ENCRYPTION STANDARDS

Contractor that electronically transmits or stores PII, PHI or MI shall comply with the encryption standards set forth below, as required by the Board of Supervisors Policy Number 5.200 (hereinafter "Policy"). For purposes of this Paragraph, "PII" is defined as Personal Information in California Civil Code Section 1798.29(g); "PHI" is defined in Health Insurance Portability and Accountability Act of 1996 (HIPAA) and implementing regulations; and "MI" is defined in California Civil Code Section 56.05(j).

3.1. ENCRYPTION STANDARDS – STORED DATA

Contractors' and subcontractors' workstations and portable devices that are used to access, store, receive, and/or transmit County PII, PHI or MI (e.g., mobile, wearables, tablets, thumb drives, external hard drives) require encryption (i.e. software and/or hardware) in accordance with: (a) Federal Information Processing Standard Publication (FIPS) 140-2; (b) National Institute of Standards and Technology (NIST) Special Publication 800-57 Recommendation for Key Management – Part 1: General (Revision 3); (c) NIST Special Publication 800-57. Recommendation for Key Management – Part 2: Best Practices for Key Management Organization; and (d) NIST Special Publication 800-111 Guide to Storage Encryption Technologies for End User Devices (collectively, "Required Stored Data Standards"). Advanced Encryption Standard (AES) with cipher strength of 256-bit is minimally required. Contractors' and subcontractors' use of remote servers (e.g. cloud storage, Software-as-a-Service or SaaS) for storage of County PII, PHI and/or MI shall be subject to written pre-approval by County's Chief Executive Office.

Contractor shall ensure that data at rest are encrypted for all devices and media on which ePHI is maintained, received, created or transmitted, including all employee workstations. Contractor's policies strictly prohibit storing ePHI on workstations or any systems located outside of Contractor's data center. Employee workstations are encrypted using Microsoft BitLocker with a FIPS 140-2 approved cryptographic module (AES-256).

Upon County's approval in accordance with the Agreement of all Deliverables under Task 4 (Migration to System Environments in Amazon Web Services Infrastructure) of the Statement of Work, the System Environments will be located in the Amazon Web Services ("AWS") hosting infrastructure. Thereafter, for all volumes that store or process ePHI, PII or MI Contractor will utilize AWS EBS (Elastic Block Store) volume encryption to protect all data at rest. This service utilizes AWS KMS (Key Management Service) for management of encryption keys. AWS KMS uses FIPS 140-2 validated hardware security modules to protect the security of encryption keys and is also integrated with AWS CloudTrail to provide logs of all key usage to help meet regulatory and compliance needs.

3.2. ENCRYPTION STANDARDS – TRANSMITTED DATA

All transmitted (e.g. network) County PII, PHI and/or MI require encryption in accordance with: (a) NIST Special Publication 800-52 Guidelines for the Selection and Use of Transport Layer Security Implementations; and (b) NIST Special Publication 800-57 Recommendation for Key Management – Part 3: Application- Specific Key Management Guidance (collectively, "Required Transmitted Data Standards"). Secure Sockets Layer (SSL) is minimally required with minimum cipher strength of 128-bit.

All data in motion to and from the System Environments in the AWS hosting infrastructure to Contractor's hosted applications will be encrypted using FIPS 140-2 approved cryptographic

modules. This includes all movement of PHI (file flow) using several interface methods (Atlas Connect, SFTP, VPNs).

Data transmission between the County end user web browsers and Contractor's application hosted web servers will also use FIPS 140-2 approved cryptographic modules (currently TLS 1.1 and above in accordance with NIST publication 800-52). Contractor will use a digital certificate to sign this traffic using a RSA 2,048 bit SSL Certificate issued by a trusted third-party Certification Authority with an expiration date of no more than two (2) years in accordance with NIST 800-57.

3.3. UPDATES TO REFERENCED FIPS AND NIST PUBLICATIONS

In the event one or more updates to the Required Stored Data Standards or the Required Transmitted Data Standards are published following the Amendment 11 Effective Date (each a "Security Update"), Contractor shall implement all such Security Updates to align with the updated FIPS and NIST guidelines as part of its Maintenance Services, Support Services, and Hosting Services if Contractor is obligated to implement such Security Update (i) under the provisions of this Exhibit Q (other than this Section 3) and/or its Attachments, (ii) as an Update under this Agreement, (iii) as part of its obligations under Exhibit G (Business Associate Agreement Under the Health Insurance Portability and Accountability Act of 1996 ("HIPPA")) to the Agreement and/or the Health Information Technology for Economic and Clinical Health Act of 2009, or (iv) otherwise by its confidentiality obligations under this Agreement.

For each Security Update for which Contractor is not obligated to provide the Security Update pursuant to the first paragraph of this Section 3.3, the Parties shall assess and mutually determine whether implementing the Security Update is outside of the realm of commercially reasonable practices or best practices in the information technology industry by considering factors such as (A) whether the Security Update has been or is anticipated to be incorporated into CVE – Common Vulnerabilities Exposure; (B) to what degree Contractor is required to implement such Security Update under any of its other contracts; (C) the cost of implementing the Security Update and the perceived benefit of the added security of such Security Update; and (D) any enhanced marketability to Contractor of having implemented such Security Update. Contractor shall implement as part of its Maintenance Services, Support Services, and Hosting Services, all Security Updates that are so determined to be a commercially reasonable practice or a best practice in the information technology industry.

In the event the Parties agree such a Security Update is outside of the realm of commercially reasonable practices or best practices in the information technology industry as described, Contractor shall develop and price in accordance with the Additional Work provisions of the Agreement, a level of effort required to remediate the System such that it complies with the Security Update and the remediated System performs in accordance with the Agreement ("Remediation Work"). It is understood and agreed that such level of effort shall only include the level of effort required to perform the Remediation Work and shall not include, for example, any time Contractor spent researching the Security Update, determining what would be required to remediate the System, or assessing whether the Security Update is a commercial reasonable practice or best practice in the information technology industry as described in this Section 3.3.

With respect to each annual period of the Term, upon prior written authorization by County's Project Director, Contractor shall provide as part of its Maintenance Services, Support Services, and Hosting Services (at no additional cost to County) up to 175 personnel hours in Remediation Work regarding Security Updates that are determined in accordance with this Section 3.3 to be outside of the realm of commercially reasonable practices or best practices in the information technology industry. With respect to each annual period of the Term, in the event County determines to implement any Remediation Work beyond the aforementioned 175 personnel hours, then the Parties shall do so as Additional Work pursuant to the applicable of a Change Order or Amendment.

4. DESTRUCTION OF COUNTY PII, PHI AND MI

If County's Confidential Information is no longer required to be retained by Contractor under the Agreement and applicable law, Contractor shall destroy such information by: (a) shredding or otherwise destroying paper, film, or other hard copy media so that the information cannot be read or otherwise cannot be reconstructed; and (b) clearing, purging, or destroying electronic media containing PII, PHI, and MI consistent with NIST Special Publication 800-88, Guidelines for Media Sanitization such that the PII, PHI, and MI cannot be retrieved.

5. SECURITY OF SYSTEMS AND DEVICES

Contractor will use, as a minimum standard, manufacturer recommended hardware and software-hardening settings to minimize the system risk exposure on all servers, workstations, PCs, and mobile devices. These systems will maintain the latest security patches, and have the latest virus definitions. Virus scans should be run daily and logged. All mobile devices storing County's Confidential Information (including PII, PHI, and MI) will be managed by a Mobile Device Management system.

6. REMOVABLE MEDIA

Except in the context of Contractor's routine back-ups or as otherwise specifically authorized by County in writing, Contractor shall institute strict security controls, including encryption of Removable Media (as defined below), to prevent transfer of PII, PHI and MI to any form of Removable Media. For purposes of this Schedule, "**Removable Media**" means portable or removable hard disks, floppy disks, USB memory drives, zip disks, optical disks, CDs, DVDs, digital film, digital cameras, memory cards (e.g., Secure Digital (SD), Memory Sticks (MS), CompactFlash (CF), SmartMedia (SM), MultiMediaCard (MMC), and xD-Picture Card (xD)), magnetic tape, and all other removable data storage media.

7. DATA CONTROL; MEDIA DISPOSAL AND SERVICING

Subject to and without limiting the requirements under Section 3.1 (Encryption Standards – Stored Data) and Section 3.2 (Encryption Standards – Transmitted Data), PII, PHI, MI and County's other Confidential Information: (i) may only be made available and accessible to those parties explicitly authorized under the Agreement or otherwise expressly approved by County in writing; (ii) if transferred across the Internet, any wireless network (e.g., cellular, 802.11x, or similar technology), or other public or shared networks, must be protected using appropriate encryption technology as designated or approved by County in writing; and (iii) if transferred using Removable Media (as defined above) must be sent via a bonded courier or protected using encryption technology designated by Contractor and approved by County in writing. The foregoing requirements shall apply to back-up data stored by Contractor at off-site facilities. In the event any hardware, storage media, or Removable Media must be disposed of or sent off-site for servicing, Contractor shall ensure all County's Confidential

Information, including PII, PHI, and MI has been cleared, purged, or scrubbed from such hardware and/or media using industry best practices (e.g., NIST Special Publication 800-88, Guidelines for Media Sanitization).

8. HARDWARE RETURN

Upon termination or expiration of the Agreement or at any time upon County's request, Contractor shall return all hardware, if any, provided by County containing PII, PHI, MI and/or County's other Confidential Information to County. The PII, PHI, MI and/or County's other Confidential Information shall not be removed or altered in any way. The hardware should be physically sealed and returned via a bonded courier or as otherwise directed by County. In the event the hardware containing PII, PHI, MI and/or County's other Confidential Information is owned by Contractor or a third party, a notarized statement, detailing the destruction method used and the data sets involved, the date of destruction, and the company or individual who performed the destruction will be sent to a designated County security representative within fifteen (15) days of termination or expiration of the Agreement or at any time upon County's request. Contractor's destruction or erasure of PII, PHI, MI and/or County's other Confidential Information pursuant to this Section shall be in compliance with industry best practices (e.g., NIST Special Publication 800-88, Guidelines for Media Sanitization).

9. PHYSICAL AND ENVIRONMENTAL SECURITY

Contractor facilities that process PII, PHI, MI, and/or County's other Confidential Information will be housed in secure areas and protected by perimeter security such as barrier access controls (e.g., the use of guards and entry badges) that provide a physically secure environment from unauthorized access, damage, and interference.

10. COMMUNICATIONS AND OPERATIONAL MANAGEMENT

Contractor shall: (i) monitor and manage all of its information processing facilities, including, without limitation, implementing operational procedures, change management and incident response procedures; and (ii) deploy adequate anti-viral software and adequate back-up facilities to ensure essential business information can be promptly recovered in the event of a disaster or media failure; and (iii) ensure its operating procedures will be adequately documented and designed to protect information, computer media, and data from theft and unauthorized access.

11. ACCESS CONTROL

Contractor shall implement formal procedures to control access to its systems, services, and data, including, but not limited to, user account management procedures and the following controls:

- 11.1. Network access to both internal and external networked services shall be controlled, including, but not limited to, the use of properly configured firewalls;
- 11.2. Operating systems will be used to enforce access controls to computer resources including, but not limited to, authentication, authorization, and event logging;
- 11.3. Applications will include access control to limit user access to information and application system functions; and
- 11.4. All systems will be monitored to detect deviation from access control policies and identify suspicious activity. Contractor shall record, review and act upon all events in accordance with incident response policies set forth below.

- 11.5. Upon County's approval in accordance with the Agreement of all Deliverables under Task 14 (Integration with Active Directory and Multi-Factor Authentication), any access to data in the application will be via a multi-factor authentication (MFA) solution.

12. SECURITY INCIDENT

- 12.1. Contractor will promptly notify (but in no event more than twenty-four (24) hours after the detection of a Security Incident) the designated County security contact by telephone and subsequently via written letter of any potential or actual security attacks or Security Incidents.
- 12.2. The notice shall include the approximate date and time of the occurrence and a summary of the relevant facts, including a description of measures being taken to address the occurrence. A Security Incident includes instances in which internal personnel access systems in excess of their user rights or use the systems inappropriately.
- 12.3. Contractor will provide a monthly report of all Security Incidents noting the actions taken. This will be provided via a written letter to the County security representative on or before the first (1st) week of each calendar month. County or its third-party designee may, but is not obligated, perform audits and security tests of Contractor's environment that may include, but are not limited to, interviews of relevant personnel, review of documentation, or technical inspection of systems, as they relate to the receipt, maintenance, use, retention and/or authorized destruction of PII, PHI, MI and/or County's other Confidential Information.
- 12.4. County reserves the right to view, upon request, summary results (i.e., the number of high, medium and low vulnerabilities) and related corrective action schedule for which Contractor has undertaken on its behalf to assess Contractor's own network security. If requested, copies of these summary results and corrective action schedule will be sent to the County security contact.
- 12.5. As used herein, "Security Incident" has the meaning given to such term in Exhibit G (Business Associate Agreement Under the Health Insurance Portability and Accountability Act of 1996 ("HIPAA")).

13. CONTRACTOR SECURITY AUDITS

Contractor shall conduct annual security audits listed below in subsections 13.1 and 13.2. Contractor shall provide to County a summary of: (1) the results of the security audits and (2) the corrective actions or modifications, if any, Contractor will implement in response to such audits.

- 13.1. One of the following: HITRUST Common Security Framework (CSF), ISO 27001:2013 (Information Security Management), Service Organization Control (SOC) 2 or other audit(s) as approved by the Public Health Information Security Officer or designee. – Contractor-wide. A full recertification is conducted every three (3) years with surveillance audits annually.
- 13.1.1. **External Audit** – Audit conducted by non-Contractor personnel, to assess Contractor's level of compliance to applicable regulations, standards, and contractual requirements.
- 13.1.2. **Internal Audit** – Audit conducted by qualified Contractor Personnel (or contracted designee) not responsible for the area of review, of Contractor organizations, operations, processes, and procedures, to assess compliance to and effectiveness of Contractor's Quality System ("CQS") in support of applicable regulations, standards, and requirements.

- 13.1.3. **Supplier Audit** – Quality audit conducted by qualified Contractor Personnel (or contracted designee) of product and service suppliers contracted by Contractor for internal or Contractor client use.
- 13.1.4. **Detailed findings** – are not published externally, but a summary of the report findings, and corrective actions, if any, will be made available to County as provided above and the ISO certificate is published on Buck Consultants LLC.
- 13.2. SSAE-16 (formerly known as SAS -70 II) or other audit(s) as approved by the Public Health Information Security Officer or designee – As to the Hosting Services only:
 - 13.2.1. Audit spans a full twelve (12) months of operation and is produced annually.
 - 13.2.2. The resulting detailed report is available to County.
 - 13.2.3. Detailed findings are not published externally, but a summary of the report findings, and corrective actions, if any, will be made available to County as provided above.

14. SECURITY AUDITS AND PENETRATION TESTING

In addition to the audits described in Section 13 (Contractor Security Audits), during the term of this Agreement, County or its third-party designee may annually, or more frequently as agreed in writing by the parties, request a security audit or penetration test of Contractor's data center and systems. The audit or penetration test will take place at a time mutually agreed to by the parties, but in no event on a date more than ninety (90) days from the date of the request by County. County's request for security audit will specify the areas (e.g., Administrative, Physical and Technical) that are subject to the audit and may include but not limited to physical controls inspection, process reviews, policy reviews evidence of external and internal vulnerability scans, penetration tests results, evidence of code reviews, and evidence of system configuration and audit log reviews. Such audit may also include requiring Contractor to provide written responses to this Exhibit Q (Information Security Requirements) and/or its Attachments, including any update or replacement of such Attachment. County shall pay for all third-party costs associated with the audit or penetration test. It is understood that summary data of the results may filtered to remove the specific information of other Contractor customers such as IP address, server names, etc.. Contractor shall cooperate with County in the development of the scope and methodology for the audit or penetration test, and their timing and implementation. Any of County's regulators shall have the same right upon request, to request an audit as described above. Contractor agrees to comply with all reasonable recommendations that result from such inspections, tests and audits within reasonable timeframes.

ATTACHMENT Q.1

Authentication Requirements

This Attachment Q.1 (Authentication Requirements) is attached to Exhibit Q (Information Security Requirements) to that certain Software and Services Agreement, County Agreement No. PH-001629, dated as of May 10, 2011 (together with all Exhibits and Attachments, all as amended in accordance with the terms thereof, the "Agreement"), by and between the County of Los Angeles, for its Department of Public Health ("County"), and Atlas Database Software Corp. d/b/a Atlas Development Corporation ("Contractor"). Capitalized terms used herein without definition have the meanings given to such terms in the Agreement. As used herein, the term IRIS has the same meaning given to the term System in the Agreement.

Contractor shall implement one of the following approaches for identity and access management in the System. The web application must be Security Assertion Markup Language (SAML) compliant. The County will not support native client application in Microsoft Azure. All users that require access to the System will require a County Active Directory (AD) account.

- Option 1 – Web application integrated with Microsoft Azure AD and using conditional access policy to secure access to the application on two conditions:
 - 1.1 User accessing the application is using a County-issued and domain joined device.
 - 1.2 Vendor/Provider accessing the application requires Microsoft Intune enrollment of their device and meets minimum security requirements connecting to the System in a fully federated model.
- Option 2 – Web application integrated with the County’s Microsoft Active Directory Federation Services (ADFS) infrastructure and using the County’s implementation of Multi-Factor Authentication (MFA):
 - 2.1 User accessing the application uses existing County MFA.

System Option	Profile	Authorized Devices	Implementation Policy
Option 1	1.1 Profile	User accessing System with a County-issued device joined to the County’s Hosted Active Directory and Windows 8.1 or above	Microsoft Azure Conditional Access Policy: Hybrid Domain Join.
	1.2 Profile	User accessing System with a vendor/provider, NON-County issued, Windows 8.1 or above desktop/laptop	Microsoft Azure Conditional Access Policy: Device must be Intune enrolled.

System Option	Profile	Authorized Devices	Implementation Policy
Option 2 (Public Health - Information Security Recommended)	2.1 Profile	User accessing System with any Windows 8.1 or above desktop/laptop	County's Multi-Factor Authentication

For Profile 1.1, County users will rely on the County's existing device security controls. County users will be allowed to access the system only through the County-issued device that is joined to the County's AD, encrypted, and has security management tools in place.

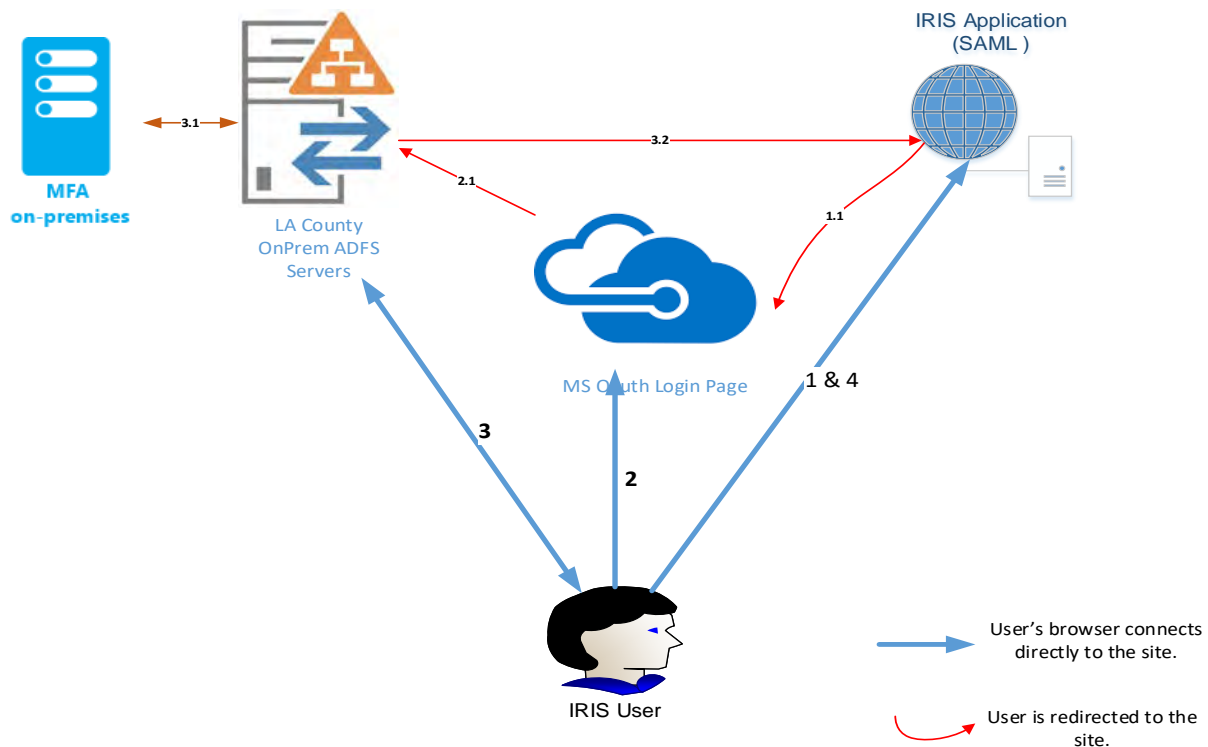
For Profile 1.2, Contractors/Providers/Vendors will be connecting to the application from devices that meet minimum security requirements. Microsoft Enterprise Mobility Suite and Azure AD will run two security checks. First check will ensure the device connecting has been enrolled with Intune and is authorized to connect to the System. Second check will require the device connecting to have up-to-date anti-virus, anti-malware software/definitions, and Windows security patches.

For Profile 2.1, Any user connecting to the application will require to enroll with the County's Multi-Factor Authentication environment prior to granting access.

1.0 Authentication Flow

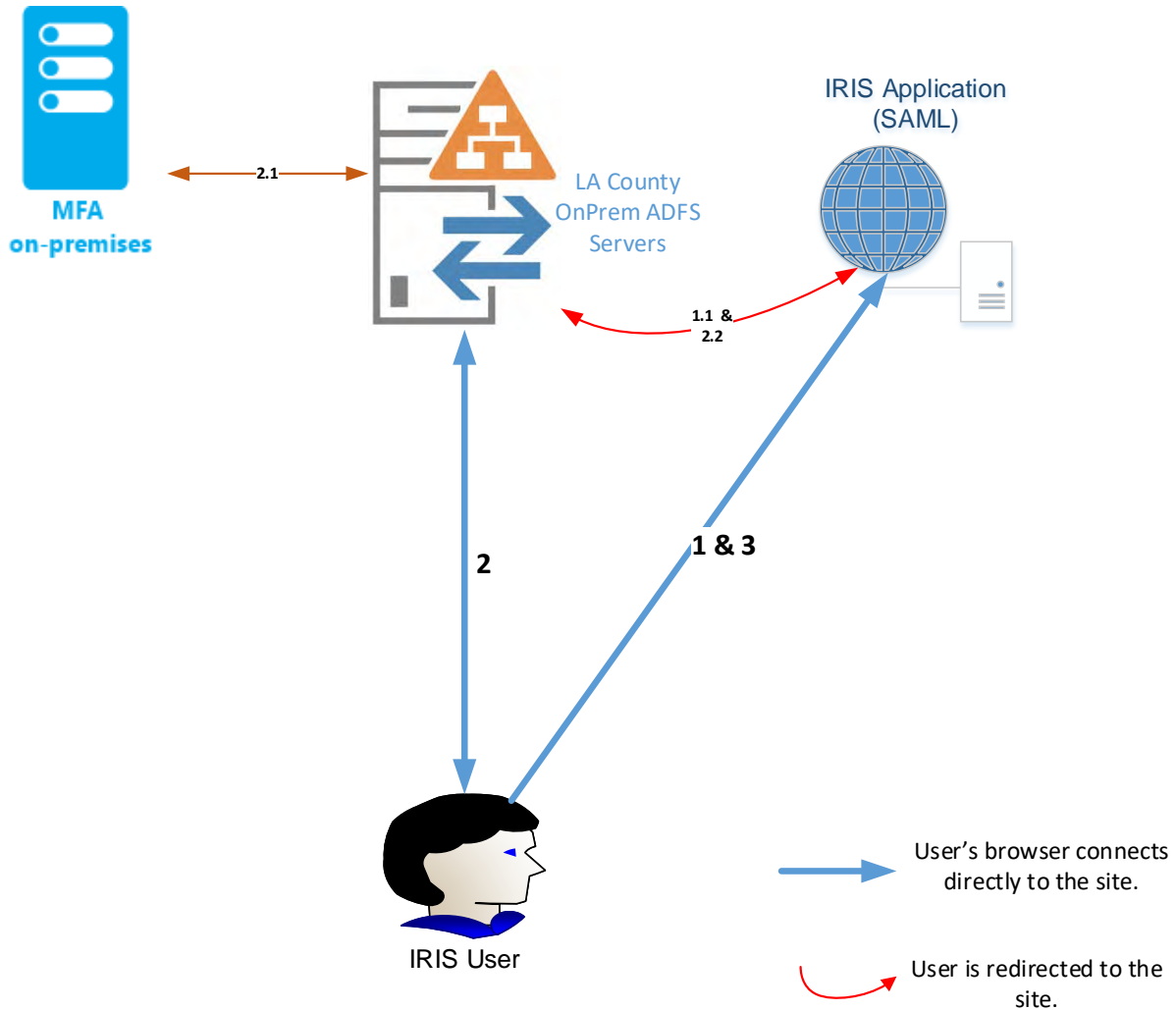
Option 1:

1. System user clicks on shortcut on desktop or goes to URL: <https://IRIS.ph.lacounty.gov>.
 - 1.1. System redirects user to Microsoft Open Authorization (OAuth) login page.
2. User connects to Microsoft OAuth login page and enters Hosted AD account (e.g., username@ph.lacounty.gov for employees and C123456@ph.lacounty.gov for contractors).
 - 2.1. Microsoft OAuth Login Page redirects user to the County's ADFS servers.
3. County ADFS servers then prompt the user for a password and MFA.
 - 3.1. User must answer a challenge question from the County's MFA (user can select to remember device and MFA prompt will not come up in future logins). Microsoft Azure AD then completes a security check to ensure device is a member of a known domain (hosted.lac.com) or, if a contractor, Azure AD ensures the device is enrolled with Microsoft Intune.
 - 3.2. Once security check is complete, ADFS redirects user to System application.
4. User now has access to the application.



Option 2:

1. System user clicks on shortcut on desktop or goes to URL: <https://IRIS.ph.lacounty.gov>.
 - 1.1. System redirects user to authenticate with the County's ADFS servers. User must use their County AD account (e.g., username@ph.lacounty.gov for employees and C123456@ph.lacounty.gov for contractors) and password.
2. County's ADFS servers prompts the user for MFA.
 - 2.1. User must answer a challenge question from the County's MFA (user can select to remember device and MFA prompt will not come up in future logins).
 - 2.2. Once MFA check is complete, ADFS redirects user to System application
3. User now has access to the application.





ATTACHMENT Q.2

Application Security Requirements

Version 2.3

Reference: County Board of Supervisors Information Security Policies

Developed by: Security Engineering Team - Applications Security

Introduction

Security Requirements Goals and Objectives:

The Application Security Requirements outline the overall security requirements that need to be addressed for every software application deployed and/or used by the County of Los Angeles. These requirements would apply to all County and externally hosted applications: County developed, third-party developed applications.

These requirements include the overall security capabilities needed to support the business processes for County departments and agencies. At a minimum, these requirements will be used to track, test and monitor the overall System's security capabilities that shall consistently be met throughout the terms of the resultant agreement.

Requests for exceptions to any specific requirements within this requirement must be reviewed by DPH IT Security and approved by the Departmental management. The request should specifically state the scope of the exception along with justification for granting the exception, the potential impact or risk attendant upon granting the exception, and risk mitigation measures to be undertaken by the project. The departmental management will review such requests, confer with the requesting project team and approve as appropriate.

Name of Application: _____

Application Owner Name **Application Owner Signature**

Departmental Information Security Officer (DISO) Name: **DISO Signature**

Section Number	Security Requirements	Meets RQMTS (Y/N)	Comments / Indicate Any Compensating Controls if Requirements Not Met
1.0	Comply with County Web Application Secure Coding Standards		
2.0	Authentication (Login/Sign-on)		
2.1	Authentication mechanism uses password that meets the County Password Security Standard		
2.2	Authentication must take place over a secured/encrypted transport protocol (e.g., HTTPS)		
2.3	Application login must be integrated with a central department and/or county authentication mechanism (e.g., AD)		
2.4	System encrypts passwords before transmission		
2.5	Ensure passwords are hashed and salted before storage		

2.6	For public facing applications, implement multi-factor authentication for applications with sensitive (e.g., password) and/or confidential information (e.g., PII, PHI)		
3.0 Authorization (Permissions)			
3.1	Users are associated with a well-defined set of roles and privileges		
3.2	<p>Users accessing resources hold valid credentials to do so, for example:</p> <ul style="list-style-type: none"> • User interface (UI) only shows navigation to authorized functions • Server side authorization checks for every function • Server side checks do not solely rely on information provided by user 		
3.3	<p>Role and permission metadata is protected from replay or tampering by using one of the following:</p> <ul style="list-style-type: none"> • Tokens/tickets expires after a single use or after a brief period • Standard authorization/authentication protocol (e.g., SAML, OAuth) 		

Section Number	Security Requirements	Meets RQMTS (Y/N)	Comments / Indicate Any Compensating Controls if Requirements Not Met
4.0	Configuration Management (Database and Application Configuration Security)		
4.1	Database Security: System restricts users from directly accessing the database		
4.2	Application Configuration stores (e.g., web.config, httpd.conf) are secured from unauthorized access and tampering (secure file access permissions)		
4.3	Application/database connection credentials need to be encrypted in transit and in storage		
4.4	Application/database connection and service accounts must comply with least privilege principle (must not be database admin account)		
5.0	Data Security		
5.1	Sensitive (e.g., password) and/or confidential data (e.g., PII, PHI) at rest and in transit must be in an encrypted format (i.e., Board of Supervisors Policy No. 5.200)		
5.2	Provide database/file encryption for protection of sensitive data fields while the data is at rest (e.g., stored data)		
6.0	Audit logging and reporting		
6.1	Auditing and logging an event in the system must include, at a minimum: <ul style="list-style-type: none"> • Successful and unsuccessful logons to application • Security Configuration changes (add, delete users, change roles/group permissions, etc) • Sensitive business transaction/functions (e.g., override approvals) • All logged information is handled securely and protected as per its data classification 		

Section Number	Security Requirements	Meets RQMTS (Y/N)	Comments / Indicate Any Compensating Controls if Requirements Not Met
6.2	The event parameters logged must include: <ul style="list-style-type: none"> • User or system account ID • Date/time stamp • IP address • Error/event code and type • Type of transaction • User device or peripheral device involved in transactions • Outcome (success or failure) of the event 		
6.3	Application provides audit reports such as configuration, user accounts, roles and privileges		
6.4	Audit logs must be compliant with applicable regulatory requirements and retention schedules		
6.5	Reports containing sensitive information must contain a “Confidential” header		
7.0	References		
7.1	County Web Application Secure Coding Standards		
7.2	County Password Security Standard		
7.3	Database Security Standard		
7.4	County Windows Server Baseline Security Standard		

7.5	Risk Management Analysis Standard (CIS Top 20 – Control 18)
7.6	Board of Supervisors Policy No. 5.200 - Contractor Protection of Electronic County Information
7.7	OWASP Application Security Verification Standard v3
7.8	OWASP Top 10 Guidelines



ATTACHMENT Q.3

SaaS Vendor Security and Privacy Assessment

Version 1.2

- References:** 6.100 – Information Technology and Security Policy
6.107 – Information Technology Risk Assessment
6.108 – Auditing and Compliance
Countywide Information Security Strategic Plan

Developed by: Countywide Application Security Engineering Team

Name of Company: _____

Completed by (Name): _____

Signature: _____

Date: _____

1.0 Purpose

This document will be used to evaluate and compare the vendors' security and privacy postures to assist in the award of the contract.

2.0 Scope

This document will provide a baseline for the evaluation of a vendor hosted and maintained application and to determine the vendor's overall security and privacy posture.

3.0 Definitions

Software as a Service (SaaS) is a software distribution model in which applications are hosted by a vendor or service provider and made available to customers over the Internet.

SSAE 16, or Statement on Standards for Attestation Engagements 16, is a reporting standard for all service auditors' reports. It is a regulation created by the Auditing Standards Board (ASB) of the American Institute of Certified Public Accountants (AICPA) for redefining and updating how service companies report on compliance controls. SSAE 16 consists of SOA1, SOA2, and SOA3 reports.

4.0 SaaS Vendor Security & Privacy Assessment

#	SaaS Security & Privacy Assessment	Vendor Response	Acceptable, more information needed, or N/A
4.1	SaaS Provider General Information		
4.1.1	Are all services (e.g., application hosting, data repository, data backup) provided within the contiguous United States? Where?		
4.1.2	Do you require criminal background checks for all personnel with access to IT resources (e.g., hardware, software, data)		
4.1.3	Are you covered by Cyber Security Liability Insurance?		
4.1.4	Is there one person assigned to lead, manage and be accountable for security? Is that person at least at a director level?		
4.1.5	Does your company have a comprehensive set of security policies and procedures modeled after ISO 27001?		
4.1.6	Is there a security training and awareness program in place for all employees? Describe the program and frequency of re-certification or re-education.		
4.2	Hosting Environment		
4.2.1	Do you separate your environments from each other, physically and logically (e.g., development, quality assurance, user acceptance testing, staging, production, training environments)?		
4.2.2	Is there a Host Intrusion Prevention (HIPS) or Detection (HIDS) system implemented on your servers? If so, which is in place?		
4.2.3	Is there a Network Intrusion Prevention (NIPS) or Detection (NIDS) system implemented for your internal network? If so, which is in place?		
4.2.4	Is there a perimeter firewall in place with an access policy?		
4.2.5	Is there a web application firewall (WAF) in place? Is it in blocking mode?		
4.2.6	Is there a security event and information management (SEIM) system in place?		
4.2.7	Are formalized change management procedures in place, including adequate separation of duties?		

#	SaaS Security & Privacy Assessment	Vendor Response	Acceptable, more information needed, or N/A
4.2.8	Are role-based access controls in place for appropriate authentication and authorization within the hosted environment?		
4.2.9	Are physical access controls in place to ensure appropriate access to IT resources in the hosted environment?		
4.3	Audit and Compliance		
4.3.1	Are you required to comply with any regulations and legislations? Which one?		
4.3.2	Do you possess one or more third-party certifications/attestations, such as: 1) HIPAA 2) PCI 3) SSAE16 4) Service Organization Control (SOC) 2 Type 2 attestation 5) TRUSTe certification 6) US-EU Safe Harbor compliance		
4.3.3	Please provide a copy. How often are IT security audits done?		
4.3.4	What types of audit (e.g., penetration and vulnerability) are performed? Please provide a copy of the latest report.		
4.3.5	Who performs these audits (e.g., third-party, internal, or both)?		
4.4	Data Access, Security, Segregation, Encryption & Destruction		
4.4.1	Is AES-256 encryption or stronger used for all data in storage?		
4.4.2	Is AES-128 encryption or stronger used for all data in transit?		
4.4.3	Is backup media encrypted?		
4.4.4	Are encryption keys centrally managed?		
4.4.5	Is a dedicated environment available for storage of customer data?		
4.4.6	If it is a shared environment, how is the customer data segregated from other shared environments?		
4.4.7	Are role-based access controls defined for the infrastructure, hardware, software, and data?		
4.4.8	Do you have a documented methodology for data backup?		

#	SaaS Security & Privacy Assessment	Vendor Response	Acceptable, more information needed, or N/A
4.4.9	Do you have a documented data destruction process for customer data, including storage media?		
4.5	Application Security		
4.5.1	Describe your application's architecture and the different tiers.		
4.5.2	Describe your coding practices. Do you incorporate the best practices and recommendations provided in the OWASP Developer's Guide and OWASP Cheat Sheet Series to implement and enhance your secure software engineering?		
4.5.3	Do you perform web application vulnerability testing/scanning (e.g., static, dynamic)? Please describe.		
4.5.4	If no, is it being performed by a third-party vendor?		
4.5.5	Do you have documented procedures for the scanning (e.g., frequency, by whom, remediation)?		
4.5.6	Is Single Sign-On (SSO) provided? What types of SSO options are available? SAML, HTTP-Fed, Open Auth, etc?		
4.5.7	Can the SaaS application be integrated with an existing Identity Management System?		
4.5.8	Is two-factor authentication supported?		
4.5.9	What Type of cookies are used (i.e., persistent or non-persistent)?		
4.5.10	Is there any confidential information stored in the cookie?		
4.5.11	Do you have user audit trail capabilities?		
4.5.12	Does the application or service provide appropriate role-based access?		
4.5.13	Does the application or service provide adequate monitoring and escalation via dashboard alerts, email or other auditable system of communication?		
4.5.14	Do you offer API access? Are API unit calls authenticated (OAuth) and encrypted (128-bit or greater)?		
4.6	Computer Incident Response		
4.6.1	Do you have a documented Incident Response Plan?		
4.6.2	Do you have an established computer incident response team?		
4.6.3	Is the Incident Response Plan tested? How often?		

#	SaaS Security & Privacy Assessment	Vendor Response	Acceptable, more information needed, or N/A
4.6.4	Do the incident response team members have clearly defined roles and responsibilities?		
4.6.5	Will your response team be open to enhance the Service Level Agreement in case of a potential data breach/data compromise?		
4.6.6	Is there a formal process/procedure in place for notifying customers when a suspected or actual breach occurs?		
4.6.7	Do you provide investigative support in case of a breach? What type?		
4.6.8	Do you provide periodic updates on the application status if a breach occurs? How often?		
4.6.9	After the incident is resolved, is a post-mortem conducted? Are procedures updated accordingly?		
4.7	Business Continuity & Disaster Recovery		
4.7.1	Are there disaster recovery and business continuity plans in place?		
	1) Are they tested?		
	2) Are the plans available for review?		
	3) Is this part of the standard services? If not, what are available non-standard services provided?		
	4) Is up-time SLAs defined?		
4.7.2	Do you have a DR/BCP Audit Program in compliance with an industry standard (e.g., ISO, NIST)?		
4.7.3	How many outages or failures have you experienced in the past 12 months?		
4.7.4	For each outage or failure in the past 12 months, provide the following:		
	1) Type of outage or failure		
	2) Time of occurrence?		
	3) Duration		
	4) Time to recover		
	5) Number of customers impacted		



BARBARA FERRER, Ph.D., M.P.H., M.Ed.
Director

JEFFREY D. GUNZENHAUSER, M.D., M.P.H.
Interim Health Officer

CYNTHIA A. HARDING, M.P.H.
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BOARD OF SUPERVISORS

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August 23, 2017

TO: Each Supervisor

FROM: Barbara Ferrer, Ph.D., M.P.H., M.Ed.
Director *Barbara Ferrer*

SUBJECT: **ADVANCE NOTIFICATION OF INTENT TO EXTEND AN EXISTING SOLE SOURCE CONTRACT WITH ATLAS DATABASE SOFTWARE CORPORATION FOR PROVISION OF VISUAL CONFIDENTIAL MORBIDITY REPORTING (VCMR) SOFTWARE**

This is to notify you that the Department of Public Health (DPH) intends to request the Board of Supervisors' (Board) approval to extend the term of a sole source contract with Atlas Database Software Corporation dba Atlas Development Corporation (Atlas) and to expand the Visual Confidential Morbidity Reporting (vCMR) Software to serve as a single integrated reporting, case management, and surveillance system for DPH programs, on a sole source basis.

This notice is being sent in accordance with Board Policy 5.100, which states that County departments that intend to request Board approval to extend the term of an existing sole source contract must provide at least six (6) months advance written notice to your Board.

Background

On May 10, 2011, your Board approved County Agreement Number PH-001629 (Agreement), a sole source Software and Services Agreement with Atlas, for the provision of an electronic communicable disease reporting system, later known as "vCMR". This Agreement was successor to several other Board agreements. Previous agreements addressed the use of Centers for Disease Control and Prevention (CDC) grant funds to develop the vCMR software in accordance with DPH specifications and the granting of certain marketing rights to Atlas. The Agreement changed the structure of the County's relationship with Atlas by transferring all County ownership for the vCMR software to Atlas in exchange for significant financial credits that applied to DPH payment obligations, a no-cost perpetual license for use of the vCMR software, and discounted rates for maintenance, support, and hosting services during the initial term of the Agreement.

Justification for Sole Source Agreement

The vCMR software is a proprietary product, developed in accordance with DPH's specifications. Given that the vCMR software was specifically designed for DPH, there are no other vendors that can provide

this software. Atlas maintains, hosts, modifies, and provides technical support for the vCMR software for disease surveillance and outbreak investigation. Over the years, the vCMR software has been enhanced to support specific DPH processes related to the management of incoming communicable disease reports, outbreak investigations, foodborne illness reports, and electronic laboratory reports.

The sole source contract will continue to support DPH's epidemiological and outbreak investigation operations and enable a major expansion of the vCMR software that will integrate all disease surveillance operations within DPH. Additional services are needed to onboard several other DPH programs beyond Acute Communicable Disease Control, including the Tuberculosis Control Program, the Division of HIV and STD Programs, Community Health Services, and the Immunization Program; implement new case management and contact investigation features to support field based operations; and replace legacy systems including the STD CaseWatch system and Tuberculosis Registry Information Management System (TRIMS). Finally, the additional services will be used to enhance the vCMR software to monitor birth defects in infants born to mothers infected with the Zika Virus, track fentanyl overdoses, and enhance notifications for foodborne illnesses, meningococcal invasive disease, and Category A bioterrorism agents.

It is most beneficial to the County and cost-efficient to obtain these services by exercising the three (3) option years under the current contract and adding five (5) additional years, for a total term of eight (8) years. This will allow DPH to effectively address pricing during negotiations for the sole source extension to the Agreement.

Impact to DPH if Sole Source Contract is Not Approved

If DPH is unable to extend the term of the sole source agreement with Atlas to expand vCMR, DPH will not be able to meet CDC grant deliverables to advance standards-based electronic data exchange with the State and other DPH partners, increase information system interoperability, and integrate its disease surveillance systems to improve communicable disease reporting within Los Angeles County. This could result in the loss of CDC grant funding, require DPH to continue to maintain redundant legacy surveillance systems and require DPH to forfeit the no-cost perpetual license to the vCMR software and significant financial credits to which the County is entitled under the terms of the Agreement.

Alternative Plan

There is no viable alternative plan for the vCMR software.

Timeline

It is anticipated that DPH will return to your Board in April 2018 to request authorization to both extend the term of this Agreement through May 9, 2026 and expand its use by other programs at DPH.

If you have any questions or require additional information, please let me know.

BF:ld
#04025

c: Chief Executive Officer
County Counsel
Executive Officer, Board of Supervisors

ATTACHMENT A

**COUNTY OF LOS ANGELES - DEPARTMENT OF PUBLIC HEALTH
 CONTRACT NUMBER: PH-001629 WITH ATLAS DATABASE SOFTWARE CORPORATION dba
 PRICING SUMMARY**

TERM: DATE OF BOARD APPROVAL THROUGH MAY 9, 2026

Description	Statement of Work Tasks and Deliverables	Amount
Tasks and Deliverables (one-time cost)	1-26	\$ 3,210,960
Maintenance Fees (Ongoing License Fees, and Subscription Fees)	27	\$ 1,794,152
Support Services Fees	28	\$ 719,815
Hosting Services Fees	29	\$ 2,893,490
Total Fees for Statement of Work Task and Deliverables 1-29		\$ 8,618,417
As-Needed Additional Work Dollars Includes:		
IRIS Electronic Lab Reporting Function		\$ 400,000
IRIS Electronic Initial Case Report Function		\$ 1,200,000
IRIS Syndromic Surveillance Function	30	\$ 432,000
All other IRIS Functions		\$ 800,000
Total As-Needed Additional Work Dollar for Statement of Work Task and Deliverable 30		\$ 2,832,000
TOTAL COST FOR ADDITIONAL EIGHT YEARS		\$ 11,450,417



William S. Kehoe
CHIEF INFORMATION OFFICER

Office of the CIO
CIO Analysis

BOARD AGENDA DATE:

7/10/2018

SUBJECT:

APPROVAL TO EXECUTE AN AMENDMENT TO A SOLE SOURCE SOFTWARE AND SERVICES AGREEMENT NUMBER PH-001629 WITH ATLAS DATABASE SOFTWARE CORPORATION dba ATLAS DEVELOPMENT CORPORATION EFFECTIVE UPON BOARD APPROVAL THROUGH MAY 9, 2026

CONTRACT TYPE:

New Contract Sole Source Amendment to Contract #: PH-001629

SUMMARY:

- Approve Department of Public Health (DPH) to execute an Amendment to a Sole Source Agreement Number PH-001629, with Atlas Development Corporation (Atlas) to develop an Integrated Reporting Investigation, and Surveillance System (IRIS) from the existing Visual Confidential Morbidity Reporting (vCMR) system to serve as a single integrated reporting, case management, and surveillance system. Programmatically, the project will expand from the original Acute Communicable Disease Control (ACDC) and Immunization programs to incorporate Tuberculosis, HIV and STD division programs, Veterinary Public Health program and expand support for the field based operations for Community Health Services and Public Health Investigation. This will entail replacing legacy systems that include STD Case watch System and Tuberculosis Registry Information Management System (TRIMS). It will also interface with On-line Realtime Centralized Health Information Management System (ORCHID) a Department of Health Services system and California Reportable Disease Information Exchange (CalREDIE), a state system. This expansion will include a Physician Portal system, separately hosted in the Atlas Cloud.
- The extension of the program will be for 8 years through May 9, 2026, and an additional cost of **\$11,182,520** from the original contract sum of \$3,213,953. Funding sources are: Measure B; Chief Executive Office (CEO) IT Legacy Systems Replacement Fund; Centers for Disease Control and Prevention (CDC), STD Assessment, Assurance, Policy Development, and Prevention Strategies grant; and net County cost (NCC). DPH further asks delegated authority to execute termination of contract, change orders, and reallocate funds as needed and use up to 10% of the contract sum (\$1,439,647) towards any Amendments deemed necessary.

Total Contract Amount: **\$14,396,473 (15 years)**

Amendment amount: **\$11,450,417⁷**

FINANCIAL ANALYSIS:

Contract costs:

Original contract cost (Years 1-7) **\$ 2,946,056**

One-time costs

IT Consulting Services **\$ None**

Ongoing annual costs:

Amendment to Sole Source Agreement #PH-001629 with Atlas

Deliverables (Years 8-15).....	\$ 3,210,960 ¹
Licensing fees \$ 23,596/Year.....	\$188,768 ²
Subscription fees \$ 34,500/Year.....	\$276,000 ³
Years 8-10	
Support fees \$85,000/Year	\$255,000 ⁴
Maintenance fees \$96,061/Year	\$288,183 ⁵
Hosting fees \$342,540/Year	\$1,027,620 ⁶
Year 11	
Support fees.....	\$87,550
Maintenance fees	\$199,379
Hosting fees	\$352,350
Year 12	
Support fees.....	\$90,176
Maintenance fees	\$203,679
Hosting fees	\$362,454
Year 13	
Support fees	\$ 92,882
Maintenance fees	\$ 208,107
Hosting	\$ 372,862
Year 14	
Support fees	\$95,668
Maintenance fees	\$212,668
Hosting fees	\$383,581
Year 15	
Support fees	\$98,538
Maintenance fees	\$217,367
Hosting fees	\$394,622
Pool dollars	\$2,832,000

Total Contract Costs:\$14,396,473 ⁷

Notes:

- ¹DPH has 26 defined deliverables. It is going to be a 5-stage implementation process **Project Initiation, Design, Build and Test, Productive Use, Final Acceptance**. Detail of the deliverables are in Attachment C.2.
- ² License fees (\$23,596/Year, total=**\$188,768**).
- ³ Subscription fees (\$34,500/Year, total = **\$276,000**).
Licensing and subscription fees are due to the Physician Portal which will not be Amazon (AWS) cloud hosted.
- ⁴Support fees (total = **\$719,815**).
Support fees are due to Customer Support and Help Desk.
- ⁵ Maintenance fees (total = **\$1,329,385**).
Maintenance fees are to maintain the Interfaces and Software.

Aggregate licensing, subscription, maintenance fees \$ 1,794,152

⁶ Hosting fees (total) \$ 2,893,490
(Includes Physician Portal, Disaster Recovery and High Availability and Government Cloud.)

⁷ The total cost for the additional eight-years of the Agreement is \$11,450,417. This includes \$267,897 of the previously authorized maximum Agreement sum which was not used during the first seven-years of the term, and is therefore being rolled over.

RISKS:

Overall: A cross program staff committee evaluated the CalREDIE system against the existing vCMR system and determined that using vCMR as a baseline and expanding on it was the best approach from a technical, governance, implementation and impact on organization point of view. This reduced overall project failure risks. The specific risks are:

- **Governance:** The Project will be headed by IRIS Project Director, Noel Barakat, and has cross program support staff from the relevant programs and divisions within DPH's Disease Control Bureau. The DPH CIO and the PMO will be directly involved in the management of the project. There is also project oversight provided by an Executive Steering Committee of which the primary stake holders will be Disease Control Bureau leadership, as well as DPH CIO, David Cardenas. Due to the nature of the inter departmental collaboration, the Governance needs will be pronounced.
- **Project:** The Project has a three (3) year implementation phase followed by 5 years of maintenance and support phase. In the implementation phase (a) Atlas will move the current DPH WorldCare environment from Atlas' hosting environment in Calabasas to the AWS cloud to allow for greater scalability, availability and resiliency. DPH has ensured that Vendor handle the move to the AWS with assistance from AWS architects to reduce migration risks (b) onboard DPH programs onto IRIS by configuring the Atlas WorldCare product (vCMR) to meet the needs of each respective DPH program. DPH does not anticipate any reengineering of application architecture or development platform of the WorldCare product. However, DPH needs to manage tightly the interface development or any unforeseen and/or necessary code changes occurring as a result of this migration. The Vendor Atlas needs to be held accountable for any migration risks.
- **Change Management:** There are multiple levels of changes associated with this project. Programmatically, the different DPH programs will need to have a stronger communication process in between to understand each other's programmatic needs and changes. The Project Director and DPH CIO have to work with business leaders in their various programs and communicate the impact of the business and technology changes at all stages effectively. Technically, there is change in the infrastructure. However, the technical and vendor risks have been mitigated via a good set of

deliverables and Business Associate Agreement. The Vendor will handle the move to the AWS. DPH will manage this Vendor as a single point of contact and reduce the risk of handling multiple vendors.

- **Security:** The move to a public cloud has been validated by DPH's Departmental Information Security Officer (DISO). The DISO has done all due diligence from a security perspective. DPH has in place a Business Associate Agreement with the contractor, which extends all County HIPAA security & Privacy requirements. The County Chief Information Security Officer (CISO) has further validated that the information security framework follows the best practices set forth by NIST (National Institute of Standards & Technology). AWS cloud security controls are commensurate with L.A. County information security policies and meet Board Policy 5.200 – Contractor Protection of Electronic County Information.
- **Contract:** Outside Counsel (Drukker Law) has been engaged and reviewed the Contract. DPH counsel validated the recommendations of the outside counsel.

PREPARED BY:


Sanmay Mukhopadhyay, Deputy Chief Information Officer

6/25/18
Date

APPROVED:


William S. Kehoe, County Chief Information Officer

6/23/18
Date

SOLE SOURCE CHECKLIST

ATTACHMENT C


Department Name: Public Health

- New Sole Source Contact
- Existing Sole Source Contract

Date Sole Source Contract Approved: May 10, 2011

ATLAS DATABASE SOFTWARE CORPORATION DBA ATLAS DEVELOPMENT CORPORATION

Check (✓)	JUSTIFICATION FOR SOLE SOURCE CONTRACTS Identify applicable justification and provide documentation for each checked item.
	➤ Only one bona fide source (monopoly) for the service exists; performance and price competition are not available. Monopoly is an <i>"Exclusive control of the supply of any service in a given market. If more than one source in a given market exists, a monopoly does not exist."</i>
	➤ Compliance with applicable statutory and/or regulatory provisions.
	➤ Compliance with State and/or federal programmatic requirements.
	➤ Services provided by other public or County-related entities.
	➤ Services are needed to address an emergent or related time-sensitive need.
	➤ The service provider(s) is required under the provisions of a grant or regulatory requirement.
	➤ Additional services are needed to complete an ongoing task and it would be prohibitively costly in time and money to seek a new service provider.
	➤ Services are needed during the time period required to complete a solicitation for replacement services; provided services are needed for no more than 12 months from the expiration of an existing contract with has no available option periods.
	➤ Maintenance and support services are needed for an existing solution/system during the time to complete a solicitation for a new replacement solution/system; provided the services are needed for no more than 24 months from the expiration of an existing maintenance and support contract which has no available options periods.
	➤ Maintenance and service agreements exist on equipment which must be serviced by the original equipment manufacturer or an authorized service representative.
	➤ It is more cost-effective to obtain services by exercising an option under an existing contract.
	➤ It is in the best economic interest of the County (e.g., significant costs to replace an existing system or infrastructure, administrative cost savings and excessive learning curve for a new service provider, etc.) In such cases, departments must demonstrate due diligence in qualifying the cost-savings or cost-avoidance associated with the best economic interest of the County.
✓	<p>➤ Other Reason: In 2011, the Department of Public Health (DPH) entered into a sole source Software and Services Agreement with Atlas for the provision of the Visual Confidential Morbidity Reporting (vCMR) software, an electronic communicable disease reporting system. The vCMR software, now known as IRIS, is a proprietary product, developed in accordance with DPH's specifications. As such, there are no other vendors that can provide this software or maintenance and support of it.</p> <p>Under the current agreement, vCMR software has been enhanced to support specific DPH processes related to management of incoming communicable disease reports, outbreak investigations, foodborne illness reports, and electronic lab reports. The new sole source amendment will expand IRIS to serve as a single integrated reporting, case management, and surveillance system for DPH programs. It will add services to onboard several other DPH programs, which will integrate all disease surveillance operations within DPH, and further enhance the vCMR software to provide expanded case management, contact investigation, monitoring, and notification features. Additionally, the amendment will provide for the development of data exchange capability with Health Agency and State systems.</p> <p>As this product was specifically designed for DPH in accordance with DPH's requirements and has been enhanced to meet program reporting needs, this sole source amendment will allow DPH to leverage the existing investment in the product as well as allow for a more expeditious implementation cycle as less development and configuration of the system will be required.</p>



 Chief Executive Office

6/13/18

 Date