Fiscal Year 2020-21 Information Technology Request

Public Health and Environment

Newborn Screening Information Management System

PRIORITY NUMBERS 2021026

Prioritized By	Priority	
DeptInst	1 of 1	
OSPB	NP of 16	Recommended for funding.

SB 40

PRIOR APPROPRIATION AND REQUEST INFORMATION

Fund Source	Prior Approp.	FY 2020-21	FY 2021-22	Future Requests	Total Cost
CF	$0	$1,575,000	$0	$0	$1,575,000
Total	$0	**$1,575,000**	$0	$0	$1,575,000

PROJECT STATUS

This is the first time the department has requested funding for this project.

PROJECT DESCRIPTION

The Colorado Department of Public Health and Environment (CDPHE) is requesting cash funds spending authority to replace and upgrade the laboratory information management system (LIMS) that supports the Colorado Newborn Screening Program (CONBSP).

According to the department, the CONBSP screens specimens from approximately 70,000 newborns a year around the state to detect a variety of medical conditions in order to connect infants with specialty care. Newborn screenings usually occur once at 24 to 48 hours of life and once between 8 and 14 days of life. CONBSP reported 135,000 specimens screened in 2018. This program also analyzes screen samples for newborns in Wyoming and from regions of Arizona. There are over 800 unique sample submitters and 4,000 pediatricians identified as care providers in the program.

CDPHE estimates that approximately 80 to 100 Colorado newborns are identified as being born with a screened disorder per year. The department states that each condition on the screening panel has treatment options as long as the condition is identified in a timely manner. New disorders are added to the screening panel by the Colorado Board of Health (Section 25-4-1004(1)(c), C.R.S.). The Colorado Board of Health must consider four specific criteria when adding a new disorder, including determining the costs and benefits. According to the Department, as the conditions considered for the screening panel increase in clinical complexity, the amount of screening data used to assess the newborn's risk also increases, which puts greater demand on the accuracy of the LIMS and the ability of the system to manage the data.

The LIMS supports the CONBSP in a variety of ways, including:

- analyzing screened samples;
- ensuring regulatory compliance;
- tracking operational logistics; and
- transmitting newborn data.

This project will move the LIMS from a legacy Microsoft system to a cloud browser-based system.

ROJECT JUSTIFICATION

According to CDPHE, this project will benefit the program for the following reasons:

Replace obsolete technology. CDPHE explains that Microsoft will no longer support the version of software that

the LIMS operates on starting in January 2020. As a result, this project will mitigate future security risks associated with using an unsupported technology which will not get security patches and support from the vendor in the future. The department also states that the current system cannot be supported internally, so once the vendor no longer supports it, CONBSP will not be able to add new conditions to the screening panel.

Systems Integration Opportunities. The department states that the current LIMS is a closed system, which requires a user to have the software physically installed on the operator's computer in order to be accessed. With this project moving the system to a cloud browser-based solution, the department hopes to connect the LIMS to other department internal data systems such as the electronic health record (EHR) systems used by major birthing facilities in order to improve data sharing capabilities.

Resolve Technical Issues. According to the department, the current LIMS experiences multiple errors across many applications causing CONBSP staff time to be used investigating those issues. The department hopes to resolve many of the issues currently experienced with this project including decreasing the time to create queries within the system and demographic data discrepancies.

The department also states that if this project is not funded and the LIMS fails in the future, the state would have to send screened samples to labs in other states, which would increase costs of the program and cause delays for results.

PROJECT COST INFORMATION

The department estimated the cost of this project based on responses to the request for information (RFI) process the department completed in spring 2019.

Cash funds. The source of cash funds is the Newborn Screening Cash Fund (Section 25-4-1006, C.R.S). The revenues in this fund are generated from fees assessed on newborn screening samples. These funds have been used in the past to support the administration, staffing, and equipment used in the CONBSP and to support the LIMS.

PROJECT COST INFORMATION, CONT.

Item	Estimated Cost
System Installation and Training	$900,000
Network Upgrades	$110,000
Project Manager	$140,000
Other Hardware	$200,000
IV&V	$150,000
5 percent Contingency	$75,000
Total	**$1,575,000**

PROJECT RESEARCH

The department states that it began researching new systems in 2017 as a result of the number of technical issues experienced in the LIMS. The current LIMS was purchased over 10 years ago and the number of technical issues has increased over time. The department also states that it discussed information management and data sharing capabilities with other states who use similar systems, such as Utah.

CDPHE says that the new LIMS may also be hosted on the Governor's Office of Information Technology (OIT) servers once a vendor is selected if it is determined to be more beneficial than a cloud-based solution.

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PROJECT SCHEDULE

	Start Date	Completion Date
Planning	July 2020	June 2021
Implementation	July 2021	October 2021
Testing	October 2021	December 2021
Closing	January 2022	