June 2, 2021

The Honorable Jeff Bridges
Chair, Joint Technology Committee
029 State Capitol Building
Denver, CO 80203

RE: OSPB Submission of 1331 Supplemental IT Capital Construction Request

Dear Chair Bridges,

As required by § 24-75-111.5(2)(c)(II), C.R.S., please find attached emergency supplemental information technology capital construction requests for all state departments. There is one project in total, which is outlined below:

1. **Department of Public Health and Environment** - We are seeking review of a non-monetary supplemental to extend the Electronic Birth Registry System Replacement project into FY 2021-22.

Please feel free to contact me by phone at (469)323-3096, or direct questions and concerns via email at meredith.moon@state.co.us.

Thank you for your consideration of this request.

Sincerely,

Meredith Moon
Deputy Director for Budget

CC: Representative Brianna Titone, JTC Vice Chair
       Senator Chris Kolker, JTC
       Senator Kevin Priola, JTC
       Representative Mark Baisley, JTC
       Representative Tracey Bernett, JTC
       Luisa Altmann, JTC Staff
       Andrea Denka, JTC Staff
       Jean Billingsley, JTC Staff
       Carolyn Kampman, Director, JBC Staff
       Alfredo Kemm, JBC Staff
       Lauren Larson, Director, Office of State Planning and Budgeting
       Jill Hunsaker Ryan, Executive Director, Department of Public Health
       and Environment

	S_CC-IT: SUPPLEMENTAL CAPITAL CONSTRUCTION INFORMATION TECHNOLOGY REQUEST FOR FY 2020-21					

Department	Electronic Birth Registration System Replacement Time Extension	State Controller Project No. (if current)		2018-019I18
Project Title	Department of Public Health and Environment	Signature Department Approval:	Ian Higgins	Digitally signed by Ian Higgins Date: 2021.06.01 10:16:52 -06'00' Date
Project Year(s):	FY 2019 to 2024	Signature OIT Approval:	Patricia Nord	Date 6/1/2021
Department Priority Number	1	Signature OSPB Approval:	Aaron Ray	Date 6/1/21
Five-Year Roadmap?	Yes	Name and email address of preparer	Ian Higgins Ian.Higgins@state.co.us	

Revision? Yes No If yes, last submission date: ___2018_____	Total Project Costs	Total Prior-Year Appropriation(s) Before FY 2019-20	FY 2020-21 Appropriation [A]	Incremental Supplemental Request FY 2020-21 [B]	New Total FY 2020-21 Request [A+B]
A. *Contract Professional Services*					
(1) Consultants/Contactors	$ 990,000	$ -	$ 240,000	$ 750,000	$ 990,000
(2) Quality Assurance	$ -	$ -		$ -	$ -
(3) Independent Verification and Validation (IV&V)	$ 100,000	$ -	$ 100,000	$ -	$ 100,000
(4) Training	$ -	$ -	$ -	$ -	$ -
(5) Leased Space (Temporary)	$ -	$ -	$ -	$ -	$ -
(6) Feasibility Study	$ -	$ -	$ -	$ -	$ -
(7a) Inflation for Professional Services	$ -	$ -	$ -	$ -	$ -
(7b) Inflation Percentage Applied		0.00%	0.00%	0.00%	0.00%
(8) Other Services/Costs	$ -	$ -	$ -	$ -	$ -
(9) *Total Professional Services*	$ 1,090,000	$ -	$ 340,000	$ 750,000	$ 1,090,000
B. *Software Acquisition*					
(1) Software COTS	$ 1,250,000	$ -	$ 2,000,000	$ (750,000)	$ 1,250,000
(2) Software Built	$ -	$ -	$ -	$ -	$ -
(3a) Inflation on Software	$ -	$ -	$ -	$ -	$ -
'(3b) Inflation Percentage Applied		0.00%	0.00%	0.00%	0.00%
(4) *Total Software*	$ 1,250,000	$ -	$ 2,000,000	$ (750,000)	$ 1,250,000
C. *Equipment and Miscellaneous*					
(1) Servers	$ -	$ -	$ -	$ -	$ -
(2) PCs, Laptops, Terminals, PDAs	$ -	$ -	$ -	$ -	$ -
(3) Printers, Scanners, Peripherals	$ -	$ -	$ -	$ -	$ -
(4) Network Equipment/Cabling	$ -	$ -	$ -	$ -	$ -
(5) Other (Specify)	$ -	$ -	$ -	$ -	$ -
(6) *Miscellaneous*	$ -	$ -	$ -	$ -	$ -
(7) *Total Equipment and Miscellaneous Costs*	$ -	$ -	$ -	$ -	$ -
D. *Project Contingency*					
(1) 5% project contingency	$ 100,000	$ -	$ 100,000	$ -	$ -
E. *Total Request*					
Total Budget Request [A+B+C+D]	$ 2,440,000	$ -	$ 2,440,000	$ -	$ 2,340,000
F. *Source of Funds*					
GF	$ -	$ -	$ -	$ -	$ -
CF	$ -	$ -	$ -	$ -	$ -
RF	$ -	$ -	$ -	$ -	$ -
FF	$ -	$ -	$ -	$ -	$ -
check (should = E)	$0	$0	$0	$0	$0

COLORADO

Department of Public Health and Environment

Jared Polis
Governor

Jill Hunsaker-Ryan
Executive Director

FY 2020-21 Supplemental-IT Capital Request | May 28, 2021

Signature

Supplemental– Department IT Capital Construction Priority: [priority number]
Electronic Birth Registration System Replacement Time Extension

Summary of Request	Total Funds	CCF-IT	Cash Funds	Reappropriated Funds	Federal Funds
FY 2020-21	**$2,440,000**	**$745,000**	**$1,695,000**	$	$
FY 2021-22	$	$	$	$	$
FY 2022-23	$	$	$	$	$

t One: Categories

System Replacement (costs escalating, failing technology, software or vendor support ended, or new technology, *e.g.*, DRIVES, CHATS)	System Enhancement Regulatory Compliance (new functionality, improved process or functionality, new demand from citizens, regulatory compliance, *e.g,* CBMS)	Tangible Savings Process Improvement (conscious effort to reduce or avoid costs, improve efficiency, *e.g.,* LEAN, back office automation)	Citizen Demand "The Ways Things Are" (transformative nature of technology, meet the citizens where they are, *e.g.,* pay online, mobile access)

Supplemental Request Summary:

The Colorado Department of Public Health and Environment (CDPHE or the Department) is requesting a supplemental request for a three year time extension to the "Electronic Birth Registry System Replacement" capital IT project originally appropriated in House Bill 18-1322.

The original request was for $2,440,000 to replace the system that is used to record births and issue birth certificates across the state of Colorado. This included $745,000 General Fund Capital Construction funds and $1,695,000 cash funds from the Vital Statistics Records Cash Fund.

The contract for Colorado's current electronic birth registration system, known as the Colorado Vital Information System (COVIS), is on an annual renewal cycle with a third party vendor. The Department's Vital Records Program has been using this system since 2007 to issue birth certificates to the public and collect and report on Colorado birth statistics including, but not limited to, birth defects, maternal and infant mortality, and Colorado's teen birth rate. This is also the system that is used to issue and collect fees from the issuance of death certificates using data from the Electronic Death Reporting System (EDRS). The

system has become outdated and unable to fulfill the needs of state and local vital records offices, data providers, and vital statistics stakeholders. CDPHE conducted a Request for Information (RFI) in 2017 to determine the cost to replace the existing system. Four viable proposals were received. Cost estimates for the viable requests ranged from $1,025,000 to $6,000,000.

The Capital IT appropriation authorized in HB 18-1322 is set to expire on June 30, 2021. Due to the reallocation of resources towards the COVID-19 pandemic response, and an unforeseen reduction in public demand for birth certificate issuance service; precipitating a decline in cash fund revenues, the Department does not believe the project can be completed within existing revenue constraints prior to the June 30, 2021 expiration of the appropriation.

Project Description:

Currently, over 99% of the approximately 70,000 annual births in Colorado are registered electronically. Hospitals, birthing centers and midwives access the COVIS system to enter birth data, including demographic and medical data. State and county vital records offices use this birth data to issue birth certificates from the COVIS system. Birth corrections, delayed births, paternities and adoption records are also housed in COVIS. All Colorado county vital records offices are connected to the current COVIS system and have the ability to search and issue birth certificates statewide. Customers order certified copies of birth certificates for various reasons including getting a passport, driver's license, social security card, and for school enrollment. In addition to the issuance of a birth certificate, this data is also used to collect, analyze and disseminate de-identified vital statistics on important issues such as infant and maternal mortality, Colorado's teen pregnancy rate, prenatal care, birth defects and more. Birth records contain more than a person's legal name and the date of birth. These records also include valuable health information for the mother and child that can be used by public health programs such as Colorado's birth defects registry and maternal and child health program to evaluate the health of Colorado's population.

Given that 99% of birth records are registered electronically, paper records are rare. Birth records are maintained in the electronic system and by microfilm as a backup. Counties do not receive other county's hard copy records or have access to microfilmed records; therefore, COVIS is the only mechanism for county offices to issue birth certificates across county lines. An electronic system provides for the timely collection of birth data, the statewide issuance of birth certificates, and the collection and reporting of vital statistics state and nationwide.

The COVIS system is currently housed on a single Office of Information Technology (OIT) server located at eFORT. The CDPHE and OIT server teams and database administrators work closely to maintain the equipment required to keep this system functional. The new system will be a web-based product and requirements will include, but will not be limited to, a web-based portal for data exchange (the current system is not web-based), HIPAA compliant electronic reporting from hospitals and midwives, electronic billing capabilities, creation and maintenance of workflows, integration with the electronic death reporting system, data quality assurance (QA) capabilities, data analysis and reporting functionality, records retention and the ability to issue certificates and track customer data by local and state vital records offices. The system must be compliant with all State and federal laws, including health care privacy, in order to prevent the release of personal health information and prevent unauthorized parties from obtaining birth certificate data. Birth certificates are 'breeder' documents used to create an individual's identity. By obtaining a birth certificate a person can obtain other key identification documents such as a passport, social security card, state ID and driver's license. Data from the current COVIS system will need to be migrated from OIT servers to cloud based servers. The COVIS system contains approximately 5 million birth records from 1910 to present as well as information on approximately 1.8 million death records as COVIS is used to

issue both birth and death certificates. Since there is not a disaster recovery plan and adequate data protections in place for the COVIS data, it is critical that the data be migrated correctly, since all Colorado birth information is currently housed in, and can be issued from, the COVIS system. The data will need to be extracted from OIT's servers, transformed to fit the new database structure required, and loaded into the new database while maintaining the integrity of the data. Data migration will be critical as all Colorado birth information from 1910 to present is currently housed in, and can be issued from, the COVIS system.

- **Systems Integration Opportunities** – The new system will be web-based allowing for easier access for approved data providers and all 53 local vital records offices in the state. Transitioning to a web based system allows for the possibility of mobile platform opportunities and makes the system operating system agnostic. The current COVIS system can only operate on a PC.

  The new system will have improved integration with the State's accounting system, electronic death reporting system and the potential for integration with hospital electronic health records (EHRs) and the State's health information exchange known as the Colorado Regional Health Information Organization (CORHIO) by utilizing the HL7 data messaging standard to securely share clinical data. Improvements in data storage structure will allow improved access by approved stakeholders for the issuance of certificates and the analysis of vital statistics. Currently, hospital birth clerks are required to enter demographic and medical information into the hospital or birthing center electronic health record (EHR) system and then enter much of this same information into the State's COVIS system. The potential for integrating duplicate data fields within the EHR and COVIS will reduce double data entry for data providers, reduce the risk of human error impacting data quality, streamline data workflows and ensure that all the information can be accessed, shared and integrated as appropriate for all parties involved.

  The electronic birth registration system is accessed and updated by county vital records offices across the state.

  An EBRS has unique requirements that the EHR platform cannot provide. For example, the birth system must have the capability to not only collect data from the hospital, but must also have the capability to do things such as:

  a. Issue certified documents (birth certificates) with limited fields, which also includes inventory management for the secure certificate paper located in multiple locations throughout the state;

  b. Collect and reconcile payment based on certificate and transaction type (birth certificate, adoption record, data modification, etc.);

  c. Upload, scan, and flag attached documents: for example, confirm if a document is a driver's license and archive identity documents with the record request to detect potentially fraudulent activity;

  d. Modify birth data based on legal records and provide an audit trail for field modifications (name changes, paternity changes, etc.);

e. And, link a person's record to multiple certificate types: for example, an adoptee who has two birth certificates, one with the adopted parents' information, and the other with the biological parents' information.

There is also the potential for the EBRS to include additional database components for adoption, paternity, marriage, divorce, and civil union as this data is currently housed on outdated, homegrown Microsoft Access databases. A web-based portal for these systems could be cost effective and improve stakeholder and customer service.

- **Risks and Constraints** – The current Capital IT appropriation expires on June 30, 2021. The COVID-19 Pandemic response required the sudden reallocation of IT resources away from the EBRS development. A transfer of $180,000 from the Vital Statistics Records cash fund balance to the General Fund per HB 20-1406 and ongoing pandemic restrictions have resulted in lower than anticipated cash fund revenues and fund balance required to ensure successful completion of the project within current appropriated time frames.

- **Operating Budget Impact** – An external analysis was done by contacting other state vital records offices, including Alaska and Washington to obtain data on the cost of their recent electronic birth registration system implementation projects as well as initiating a Request for Information (RFI). The program also obtained information from the National Association for Public Health Statistics and Information Systems (NAPHSIS), a national organization that represents state vital records programs.

Based on the RFI proposals, the system cost ranged from $1,025,000 to $6,000,000. Cost estimates for annual maintenance ranged from $366,000-$600,000. The Department is assuming that annual system maintenance costs will be $488,000. This is based on using the standard 20% of system costs. The Department will submit an operating request if needed once the system has been implemented and actual maintenance costs are known.

Background of Problem or Opportunity:

The Department is requesting a supplemental continuation of the "Electronic Birth Registry System Replacement" Capital IT project originally appropriated in House Bill 18-1322.

The vetting of requested system specifications and Request for Proposal (RFP) responses in partnership with the Office of Information Technology (OIT) took longer than anticipated, resulting in a delay of system development work until mid-FY2019-20.

In April of 2020, the COVID-19 pandemic response required the reassignment of resources from the development of the birth registry replacement, now known as "VESCO" (Vital Event System of Colorado).

In June of 2020, House Bill 20-1406 authorized the transfer of $180,000 in cash fund revenues from the Vital Statistics Records Cash Fund to the General Fund.

The prolonged closure of the Vital Records office to the public, as well as a decrease in demand for birth certificate issuance during the COVID-19 pandemic has resulted in decreased cash fund revenues into the Vital Statistics Records Cash Fund, which was appropriated to fund 75% of the Capital IT project costs.

The current projections for both project implementation and cash fund revenues necessitate an extension of the current Capital IT appropriation to provide for continued development of the system, in order to stay within current projections of cash fund revenues without the immediate need for a cash fund fee increase to generate additional revenues.

Justification:

- **Business Process Analysis** – This project has received approval from CDPHE's Business Technology Team (BTT) and Executive Leadership Team (ELT). The program has been in consultation with an OIT business analyst in regards to defining system requirements and business processes. In accordance with the guidance provided by the OIT gating committee, a vision and scope document was submitted and approved by OIT.

  Vital Records performed an internal assessment of all COVIS specific processes that currently or will interface with an updated electronic birth reporting system (EBRS) in the future. While evaluating these processes, internal and external stakeholders were asked to assist with determining the specific needs of new EBRS and how fulfillment of these needs would improve the status quo and better protect the state's birth data. System requirements were prioritized using a numeric scale based on their expected improvement in the quality of birth data being produced, benefit to stakeholders, and the timeliness and quality of birth certificates issued to the customer. The results of this assessment were the basis for the requirements written into the RFI.

- **Cost-Benefit Analysis and Project Alternatives (per H.B. 15-1266)** – A RFI was issued in January 2017 and results were evaluated in the spring-summer of 2017. Business requirements were developed by the Office of Vital Records in consultation with OIT Business Analysts. The department did not seek vendor or consultant assistance with preparing the specifications for the system replacement.

  The RFI cost estimates for the system replacement resulted in a range between $1,025,000-$6,000,000 for system development and $366,000-$600,000 for ongoing maintenance costs.

  Although the cost estimates from the RFI indicate that replacing the current system will result in a higher annual maintenance cost for the program, the investment in replacing the system will lead to more efficient and effective data collection, higher quality data, timely issuance of birth certificates for the public and an adequate level of data security and integrity for confidential health information. If the current system is not replaced, the vendor will not update the current platform and the state will continue to pay $184,000 annually in system maintenance for an IT solution that does not meet current and future business needs and does not meet best practices for data security and integrity.

  In addition, the limitations of the current COVIS system have led to the need for multiple Microsoft Access databases that perform functions that could be consolidated in a new system. These include databases for adoption, and induced termination of pregnancy. By including modules in a new system to collect and report this data, there would be cost savings and efficiencies by eliminating the support costs for onsite OIT staff and the reduction of employee staff time used for manual data

collection, quality assurance, and reporting. The OIT costs will be adjusted through the normal common policy true up process and therefore may not appear in the budget for two or three years. The time saved for programmatic staff will be replaced with tasks that are of higher value to the program, such as conducting site visits to local vital records offices and developing webinars that include training, education, and relationship building with stakeholders.

The replacement of the current system will also lead to increased efficiencies for hospital and birthing center stakeholders. Currently all data entry must be done manually by hospital birth clerks in both the electronic health record (EHR) and again in the COVIS system. The Department plans to identify an IT solution that can utilize electronic messaging for the majority of data fields that can be transmitted directly from the EHR into the new birth system. The cost benefits of doing this will not only be recognized by data providers, but also by Department staff as the data quality will be improved and time spent dealing with data errors will be reduced. The implementation of a modern electronic birth system will reduce duplicate data entry and data entry errors, lead to improved alignment of resources, and will consolidate the use of multiple software systems

- **Success Criteria and Improved Performance Outcomes** – A large-scale process improvement event was conducted in Vital Records in 2015. Paper and electronic processes were mapped and metrics and outputs were defined with input from program staff. As a result, work flows for the issuance, modification and registration of birth records were streamlined and these operational tasks were consolidated into an "operations unit". Other key functions were aligned to create a new "program support unit" lead by an expert in data technology. This new unit is responsible for identifying and implementing improvements to program data systems including data collection, reporting, security and training for data providers. In order to make further improvements in program processes, a modern birth registration system is required to meet current standards. Efficiencies of a new system include:

  o Third-party vendor staff will no longer be required to assist with server maintenance, push of system updates, and setting up new user accounts

  o Currently COVIS must be installed on a user's computer and requires the user to have full administrative rights to the computer's operating system. This level of access is contrary to the Governor's office of IT security policies (Cyber Policy 102 (8.5.5), TS-INF-003 (6.1.5)). By being web based, the new system reduces workload for OIT associated with computer replacement, imaging and administrative rights. The new system would also increase compliance with OIT best practices related to system security.

  o By complying with OIT security policies, security risks embedded within the nature of the current COVIS system can be avoided. For example, COVIS requires that some of its files live in the Windows operating system folder. If there are any issues with those files, a user has to go into that folder and delete the problem file. This scenario currently occurs on average twice a month. This requires administrative rights. However, if the user makes a mistake and deletes a windows system file, they could disable their computer. Administrative rights also allows a user to download and install any computer software. This means a user could download a program from the internet or click on a link on a website to install something. If that install has a virus, it would bypass all antivirus protections and potentially infect all computers connected to the network.

o   Approximately 1,300 hours a year will be saved by program staff in answering questions regarding account creation and password resets. The hours saved will be replaced with tasks that are of higher value to customers, such as conducting site visits to local vital records offices and developing webinars that include training, education, and relationship building with stakeholders. These activities will help the program proactively address potential issues and help promote higher quality data and better timeliness of registration.

o   The program will no longer require dedicated support from a vendor consultant currently housed on site.

o   Hospital and other data providers will save time by reducing double data entry. For example, currently, it takes approximately one hour for a birth registrar to manually enter all of the information required in a birth certificate, although it could be longer when counting the time it takes to get the various charts and medical records that may be located in different departments within a hospital. If there are roughly 70,000 births per year, at least 70,000 hours of time would be saved in data entry.

o   Transitioning to a new platform would allow for better security, and tighter connections to other web based platforms, and will allow for the use of current backup technologies to be employed.

- **Assumptions for Calculations –**

Cost Breakdown:

Capital Purchase for software development and implementation $2,000,000
Estimated expenditures for professional services; $240,000
IV&V: $100,000
Estimated contingency $100,000
Total System Costs = $2,440,000

Software Development and Implementation Costs: Cost estimates are based on preliminary information obtained through an RFI and discussions with other states that recently updated their electronic birth reporting systems. Costs are estimates based on preliminary research of likely systems.

Professional Services: The professional services dollars are for a project manager and independent verification and validation.

IV & V: This estimate follows the OIT estimated cost of approximately 5% of the total project cost. This provides independent validation that the vendor is performing and the system will meet the contractual requirements.

Project Contingency: The 5% common policy for contingency costs has been added to the project.

Ongoing Maintenance: These costs are estimated to be $488,000 a year. The program may need to request additional operating spending authority starting in FY 2023-24.

- **Consequences if not Funded** – With the COVIS maintenance contract continuing past 2019 as an annual at-will renewal, it is a possibility that the current third-party vendor could decline continued maintenance of the existing system. Additionally, there are increased risks of data security breaches with the continued utilization of a system which is housed on servers that no longer receive software patch support from Microsoft.

Failure to continue developing a replacement to the current COVIS system could have a negative impact on customers, data providers, data users and State and local vital records staff. Consequences include the inability to perform key business functions, inability to maintain integrity of data, and functionality of Colorado vital records services, loss of revenue due to inability to provide services to customers (electronic system is the only mechanism to issue birth certificates in local offices throughout the state), and greater risk of unsupported IT infrastructure/software in the future.

If the current system were to fail, the Department would be required to collect paper birth certificate documentation, significantly delaying the process for registering a birth (CDPHE is statutorily required to register a birth within 10 days.) This would also delay the submission of confidential health data that is collected during the birth certificate registration process and used by public health programs, such as the birth defects and vital statistics registries, to monitor, evaluate and implement strategies to improve the health of Colorado citizens.

In addition to the delay in registration, the issuance of birth and death certificates throughout all 53 vital records offices that serve all 64 counties in Colorado would be significantly delayed as a result of reverting to a purely paper-based process. For over ten years, vital records offices in the State have relied on a centralized vital records registration and issuance system that has allowed for expedited processing of vital event certificate orders for customers. Local vital records offices throughout the State can log into the centralized system and print certified copies of those records. This has provided many benefits for Coloradans since anyone can go to any vital records office in Colorado to order a copy of their birth certificate, regardless of where they were born. This significantly increases the level of service and convenience the State provides to its citizens. However, should the current system fail, it would require the program to operate in a purely paper-based process. Local vital records offices would not have access to any birth certificate record after 2006 - the year that COVIS was implemented. All birth certificate requests for records registered during this time would have to be directed to the CDPHE Vital Records Office. This would be extremely inconvenient for customers used to being able to obtain records in their local vital records offices. Reverting back to a purely paper registration and issuance process would significantly decrease the effectiveness, level of efficiency, and elegance of the vital records program, negatively affecting its ability to advance these core principles of the State of Colorado.

Birth certificates are sometimes referred to as "breeder" documents, which are documents that are used as a basis for establishing additional identity documents, such as a driver's license, passport, or a social security card. Because of this, the confidential information contained within a birth certificate is highly valuable to an identity thief. Therefore, birth certificate information that belongs to the citizens of Colorado must be protected with a high level of security, using the latest technology and security standards. However, the current system, which is built from an outdated programming language platform, has struggled to accept recent security patches that protect it from potential cyber-attacks. As time passes, the system will continue to operate with security protections that are no longer capable of withstanding cyberattacks that could be detrimental to the integrity of

vital records data. The longer the Department continues with the current system, the higher the vulnerability of the data contained within it. This increases the risk of fraud against the birth certificates of everyone born in Colorado.

Implementation Plan:

In order to solicit more accurate information on vendor availability, system functionality, and associated costs, the program worked with internal and external stakeholders to gather and document business requirements with the assistance of an OIT Business Analyst (BA) in 2016. This information was used to draft and post a RFI in early 2017.

The Department submitted a Request for Proposal (RFP) to select a vendor to replace Colorado's current electronic birth registration system. Vendor selection was be performed by a committee of subject matter experts, including OIT, data providers (hospitals and midwives), data users (birth defects registry, maternal health, newborn hearing and metabolic screening) and State and local vital records office personnel, in conjunction with the CDPHE and OIT procurement offices to ensure a complete and fair review. The selection committee reviewed and scored each proposal submitted based on the criteria determined during the business process analysis.

Unfortunately, all vendor based submissions were deemed as either not meeting the criteria set out in the RFP or did not improve on the current system in any substantive way. The vendors were informed in writing at the end of September 2019. After the failure of the solicitation, CDPHE requested that OIT, via an Interagency agreement with the CDPHE Informatics program, submit a proposal for the system which was accepted. After deciding to go with OIT resources for a build, the final award was given to the Informatics program in September 2019.

In order to complete the system as originally requested, system development work, data migration, testing, and final configuration is expected to continue into the winter of FY23. Followed by a soft launch, user acceptance training, and a 6-month period of operating the new system in tandem with COVIS to ensure that full functionality of the system is within design parameters.

- **Change Management –**
  - The program has planned for user acceptance training to commence during the final development of the new system, to include both personnel responsible for initial system data entry, and Vital Records Office staff. Updating training and user guides are also planned.
  - Planned System testing includes:
    - Data migration testing, to commence during FY 2021-22
    - Operating and performance testing during FY 2021-22
    - Testing of system integrations and interfaces during and after system launch in FY 2022-23
    - User-acceptance testing during FY 2022-23.

- **Alignment with OIT Best Practices and Standards –** This request aligns with best practices in a variety of ways. Updated software will reduce the current burden on the OIT server team and database administrators who support the current system. The COVIS system does not align with current programming languages and messaging standards due to its outdated SQL platform. If the

new system selected through the RFP process is web based and vendor hosted, the project will align with OIT's Cloud First Initiative.

The COVIS system is currently supported internally with the assistance of a single consultant who is unable to provide significant updates to the platform or functionality of the system. Vital Records requires a system with firm vendor support which will allow for future updates. For example, electronic messaging standards have been evolving for secure data exchange and future electronic birth reporting systems will require functionality beyond the capability of COVIS. The OIT business strategy focuses on information security, providing a customer-oriented business strategy and inter-agency data exchange. COVIS does not have the functionality for the Department to meet these goals. An ideal system will utilize industry data messaging standards to securely exchange data between data providers and the Vital Records Office while adhering to OIT information security policies. The new system will provide a web-based interface for data providers to efficiently send information for data registration, issuance and statistical reporting. Such a system will improve internal workflow to minimize redundancies, reduce human error, and provide the analytical capabilities necessary to identify processes with the potential for improving efficiency and reducing errors.

The replacement of the current COVIS system is consistent with CDPHE's strategic priorities, specifically towards advancing the Wildly Important Goal of Advancing Operational Excellence through Digital Transformation of the Department.

The replacement of the current COVIS system is also a lynchpin in the Department's 5-year IT roadmap. The Vital Records Office has additional, aging and disparate electronic registries that are slated for modernization activities to comport with the standards being set by the Electronic Birth Registry System Replacement project.

- **Disaster Recovery and Business Continuity** – The COVIS system is currently housed on OIT servers and the department has confirmed with OIT that a disaster recovery plan is <u>not available</u> for this system. The data is currently housed at eFORT and is backed up each night. If the servers at eFORT are damaged, it will take a minimum of 3 to 4 days to rebuild a server environment to bring the data back online. A new web-based cloud solution will ensure disaster recovery and data protection for Colorado's electronic birth data. The new system will be a secure web-based system that will have built in security and disaster recovery to protect the state's birth data and provide for timely and accurate issuance of Colorado birth certificates for the public and reporting of birth data for statistical purposes. There may also be the potential to link the system to electronic health record (EHR) data through CORHIO or hospital EHR systems, leading to efficiencies in data collection and a reduction in data errors

- **Accessibility Compliance** – CDPHE has worked with OIT to ensure that contract language for web-based hosting services and system development services includes language which requires the vendors to meet all State and Federal statutory requirements regarding non-visual system access standards and other federal laws requiring IT accessibility.

ADDITIONAL REQUEST INFORMATION		
Please indicate if three-year roll forward spending authority is required.	X Yes	❑ No
Is this a continuation of a project appropriated in a prior year?	X Yes	❑ No
If this is a continuation project, what is the State Controller Project Number?	2018-019I18	
Please attach letter from OIT indicating review and approval of this project		

CONTINUATION HISTORY (DELETE IF NOT APPLICABLE)				
	FY 2018-19 Appropriated	FY 2019-20 Appropriated	FY 2020-21 Appropriated	**Total Appropriations**
Total Funds	$2,440,000			**$2,440,000**
Capital Construction Funds	$745,000			**$745,000**
Cash Funds	$1,695,000			**$1,695,0001**
Reappropriated Funds				
Federal Funds				
	FY 2018-19	FY 2019-20	FY 2020-21	**Total**
Amount Spent	0	$184,608.86	$264,756.62	**$449,365.45**
Amount Encumbered			$398,079.36	**$398,079.36**
Total Funds Available		$2,255,391.14	$1,592,555.16	**$1,592,555.19**

ESTIMATED PROJECT TIME TABLE		
Steps to be completed	**Start Date**	**Completion Date**

CASH FUND PROJECTIONS (DELETE IF NOT APPLICABLE)			
Cash Fund name and number:	**Vital Statistics Records Cash Fund 1240**		
Statutory reference to Cash Fund:	**25-2-121)2_)(b)(I), C.R.S.**		
Describe how revenue accrues to the fund:	**Birth and Death registration fees**		
Describe any changes in revenue collections that will be necessary to fund this project:			
FY 2019-20 Actual	**FY 2020-21 Projected**	**FY 2021-22 Projected**	**FY 2022-23 Projected**

Ending Fund Balance	Ending Fund Balance	Ending Fund Balance with Project Approval	Ending Fund Balance with Project Approval
$1,007,581.35	$585,000		