STATE OF CALIFORNIA
Budget Change Proposal - Cover Sheet
DF-46 (REV 10/20)

Fiscal Year	Business Unit	Department	Priority No.
2023-24	8570	California Department of Food and Agriculture	4

Budget Request Name	Program	Subprogram
8570-013-BCP-2023	6570 – Agricultural Plant and Animal Health; Pest Prevention; Food Safety Services	

Budget Request Description
Emerging Threats Information Management System

Budget Request Summary
The California Department of Food and Agriculture (CDFA) requests $6,685,000 ($4,212,000 General Fund [GF] and $2,473,000 Department of Food and Agriculture Fund [AF]) and 3.0 positions in 2023-24, $12,138,000 ($7,647,000 GF and $4,491,000) in 2024-25 and 2025-26, $6,672,000 ($4,204,000 GF and $2,468,000 AF) in 2026-27 and $5,073,000 ongoing ($3,196,000 GF and $1,877,000 AF) to implement a replacement of the existing legacy Emerging Threats (ET) Information Management System for CDFA's Animal Health and Food Safety Services division, the lead state organization for protecting animal health, public health, and California's economy from catastrophic animal diseases, food safety and other health or agricultural related issues.

Requires Legislation	Code Section(s) to be Added/Amended/Repealed	
☐ Yes ☒ No		
Does this BCP contain information technology (IT) components? ☒ Yes ☐ No *If yes, departmental Chief Information Officer must sign.*	**Department CIO**	**Date** 1/1/1900

For IT requests, specify the project number, the most recent project approval document (FSR, SPR, S1BA, S2AA, S3SD, S4PRA), and the approval date.

Project No. 8570-089
Project Approval Document: S1BA (S2AA submitted and in CDT review)

Approval Date: 3/20/2019

If proposal affects another department, does other department concur with proposal? ☐ Yes ☐ No

Prepared By	Date	Reviewed By	Date
Rebecca Nix	7/8/2022	Dr. Annette Jones	7/8/2022
Department Director	**Date**	**Agency Secretary**	**Date**
	1/1/2023		1/1/2023

Department of Finance Use Only

Additional Review: ☐ Capital Outlay ☐ ITCU ☐ FSCU ☐ OSAE ☐ Dept. of Technology

APBM	Date submitted to the Legislature
Christian Beltran	1/10/2023

A. Budget Request Summary

The California Department of Food and Agriculture (CDFA) requests $6,685,000 ($4,212,000 GF and $2,473,000 Department of Food and Agriculture Fund [AF]) and 3.0 positions in 2023-24, $12,138,000 ($7,647,000 GF and $4,491,000) in 2024-25 and 2025-26, $6,672,000 ($4,204,000 GF and $2,468,000 AF) in 2026-27 and $5,073,000 ongoing ($3,196,000 GF and $1,877,000 AF) to implement a replacement of the existing legacy Emerging Threats Information Data Management System (ET).

B. Background/History

CDFA's Animal Health and Food Safety Services Division (AHFSS) serves the demographically and geographically diverse citizens of California by protecting public health, animal health, the environment, and the economy from catastrophic disease outbreaks spilling into or emerging from livestock and poultry. The Division also addresses animal issues in the face of State-level natural or man-made disasters. Agriculture is identified as a critical infrastructure by the Governor's Office of Emergency Services (CalOES) that should be protected to provide economic and public health stability. The size and complexity of this mission requires accurate core geographic and demographic data to effectively deploy limited resources needed to stop outbreaks or prevent threats to the food supply.

Incidents and disease outbreaks impacting both humans and domestic animals are an ongoing threat to California's public health, environmental health, consumers' access to safe products, and the viability of rural communities. Additionally, recent research by the Johns Hopkins Coronavirus Resource Center has supported that pandemics and disease outbreaks inflict disparate impacts upon minority populations. In the past five years in California, CDFA staff have responded to multiple animal disease emergencies, such as avian influenza, (introduced by wild birds), virulent Newcastle Disease (vND), (introduced by foreign travelers), Rabbit Hemorrhagic Disease, (introduced by wild rabbits), SARS CoV2, (introduced by humans), and Equine Herpes Myeloencephalopathy, (a new, emerging pathogen), among others. Outbreaks of the more than 60 reportable diseases that trigger an emergency response can have significant statewide psychological and economic impacts and require rapid response based on accurate real-time data. Some of the reportable diseases threaten human as well as animal health. To make decisions that can stop spread, the department must have reliable core data, including where at-risk populations are located. Because viruses spread exponentially and are virtually unseen, this data must be immediately available and reliable. While models of introductions of foot and mouth disease suggest million-to-billion-dollar impacts when response is delayed by even a couple of hours, CDFA has had recent real examples of the threat. During 2014 and 2015, an epidemic of Avian Influenza in the United States extended to 15 states, including California, affecting the loss of over 50 million birds at an estimated response cost of $850 million with over 3,400 personnel responding to this outbreak. A more recent example of these outbreaks occurred beginning in January 2022. The U.S. Department of Agriculture (USDA) confirmed Highly Pathogenic Avian Influenza in South Carolina. Within months, it spread to almost every state in the nation, affecting over 360 flocks and over 40 million birds. AHFSS continually defends Californians against these types of tragedies and requires

a new, better data information management system to remain effective in its mission to protect Californians from these horrors.

Recognizing the need to be a step ahead of disease outbreaks, in 2004, AHFSS undertook significant efforts to consolidate several stand-alone legacy systems distributed across the state into a single web-based system to enhance the collection, processing and reporting of program activity data. Using GF and Antiterrorism funds, development of the system started in 2007 and was deployed in several phases beginning in 2009. The Project Implementation Evaluation Report, submitted to the California Department of Technology (CDT) in September 2013, indicated the project team achieved the stated objectives and kept the project within 10 percent tolerance of scope, schedule, and budget.

This ET system continues to serve as the data repository for several programs, but the architecture and functionality is significantly outdated leading to core data security and integrity issues. While the system can meet licensing and registration program needs, the ability to maintain accurate core data required to respond to emergencies and prevent food security risks has been surpassed.

The 2019 Budget Act included $2.5 million one-time GF for ET consultant services for project planning, data cleanup, system documentation, and the development of a potential information technology solution. The Project Approval Lifecycle (PAL) Stage Gate 1 Business Analysis was completed, and the Stage Gate 2 Alternatives Analysis was submitted to CDT, reviewed, feedback provided, and an updated version is currently under review by CDT.

An additional $2.9 million has been approved in the 2022 Budget Act to complete the PAL process and hire a contractor to implement the replacement systems. This proposal requests funding for the project's implementation services. CDFA has been in discussions with CDT Oversight and their State Technology Procurement (STP) Division regarding the potential use of a Hybrid-Challenged Based Procurement approach to expedite the procurement of the contractor to implement the solution. CDFA will work with STP to pursue this innovative procurement approach to reduce the planning and procurement time to potentially begin the implementation of the replacement solution sooner.

C. State Level Consideration

This proposal is consistent with the Administration's policy and priority of protecting the health and safety of the citizens of California as well as the environment and will help CDFA respond efficiently and effectively to future food safety incidents, disease outbreaks, and natural disasters. It is in accordance with the primary mission of CDFA, which is to promote and protect a safe and healthy food supply and to enhance local and global agricultural trade, through efficient management, innovation, and sound science, with a commitment to environmental stewardship and an equitable and orderly marketplace for California's agricultural products.

Further, this proposal aligns with CDFA's Strategic Pan to optimize resources through collaboration, innovation, and process improvements. This project aligns with the goals listed in the CDFA Strategic Plan and the CDFA Technology Roadmap and will serve to leverage an enterprise solution for all future applications, eliminate data silos, and allow cross-program reporting for enhanced business intelligence to support decision making and the Strategic Plan.

This project will allow CDFA to meet responsibilities outlined in the State of California Emergency Plan that address or mitigate food shortages, food contamination events, and foreign animal

diseases such as Exotic Newcastle, Foot and Mouth Disease (FMD), or High Path Avian Influenza. Under the list of Emergency Support Functions, CDFA is responsible for supporting the responsible jurisdiction and coordinating activities during and immediately following a disaster impacting the agriculture and food industry and supporting the recovery of impacted industries and resources post disaster. The plan specifically references AHFSS as a resource to protect public health, the health of California's livestock and poultry, and to provide safety of food at animal origin.

D. Justification

A 2016 analysis of ET performed by the CDT Data Management Consultant found that ET's current data model no longer meets the business need of AHFSS. The report stated that ET's "data integrity may have already been compromised" impacting the ability to exchange essential demographic information amongst AHFSS programs. This impact of poor data integrity was exemplified at the onset of virulent Newcastle Disease (vND) emergency response described below. Additionally, the CDT report identified that the means to ensure reliable shared data, necessary for key management decision, are not fully implemented, resulting in duplicate information and orphaned records (not linked to a parent record). The following data quality issues are just a few of the concerns identified in the CDT report: duplicate farm records (over 3,000); incomplete data (59,380 active operation records with no date); and invalid data issues (street number, street name, and street suffix are all in the same field and are not uniform, making it hard to search for existing premises). Since this report, these numbers have increased exponentially with the adoption of mobile devices to capture activity.

AHFSS has taken measures to address some concerns regarding data integrity in ET such as a significant data cleanup effort to address missing or incomplete data, invalid data, and duplicate records. Nearly 50,000 mailing addresses for active operations in ET were reviewed and validated to ensure no critical program information was lost while being converted to U.S. Postal Services standards. Furthermore, reports on ET data have been developed to continually identify problems and inconsistencies. Despite the significant efforts by AHFSS to improve data quality, there continue to be critical concerns regarding data integrity and security in ET. Weak security protocols, the siloed internal structure of ET, and a lack of data validation standards are just a few examples of the concerns that continue to threaten AHFSS ability to rely on ET to manage emergency events. ET is not currently in a Tier III data center as required by Government Code 11546.3(b)(1)(A), but instead is hosted within the CDFA headquarters facility.

ET's critical information deficiencies were highlighted at the onset of the vND response in 2018. CDFA's information for facilities producing or handling eggs was inconsistent across AHFSS programs, resulting in data quality issues. It required nearly three months and hundreds of hours of staff time to validate and clean information associated with poultry and egg facilities. Accurate information is essential to a rapid and effective response during an animal health or food safety incident and any delay increases the potentially negative effects and hinders control measures. While studies and modelling relative to poultry diseases such as vND or Avian Influenza have not been completed to estimate the economic impact of delays in response, FMD, a similar foreign animal disease virus in cattle, has been studied. UC Davis researchers estimated that the median economic impact of a FMD outbreak in California would result in losses of $2.3–$69 billion as detection delay increased from 7 to 22 days, respectively. If assuming a detection delay of 21 days, the estimated impact would be an additional 2,000 animals slaughtered and an additional economic loss of $565 million for every a additional hour of delay. Furthermore, disease outbreaks have significant psychosocial impacts. The British Medical Journal (BMJ) published a paper detailing the psychosocial impact of the 2001

FMD outbreak in the United Kingdom. The study by BMJ found that there was a disturbed relation between health and place. Individuals in the community and the FMD response teams recounted terrible stories detailing the distress, anguish, horror, and re-traumatization caused by the outbreak. Another negative impact of disease outbreaks and pandemics is the disparate outcomes observed in minority populations. Research by the Johns Hopkins Coronavirus Resource Center shows that while Hispanic and Latino residents make up 39 percent of California's population, more than half of all the COVID-19 cases and nearly half of all the COVID-19 deaths in California were of Hispanic and Latino residents. The research also showed disparate impacts on Black communities, where in Washington, D.C., Black residents make up 45 percent of the population but 76 percent of COVID-19 deaths.

AHFSS will dedicate the necessary resources to ensure that the business needs of the program are met and align with the CDFA Strategic Plan goals. AHFSS is requesting to add 1.0 permanent Research Data Specialist III and 2.0 permanent Research Data Specialist I positions to further support the project and ensure its continued success in meeting all the business needs of AHFSS. The Research Data Specialist III would oversee the project for all AHFSS programs from the business perspective and the two Research Data Specialist Is would each dedicate time and expertise to support and work closely with half of the AHFSS programs to ensure all business needs are met. With the current AHFSS staff level of expertise and workload, redirection is not a feasible option. Additional support for the programs is necessary to meet all the business needs of the programs during and post solution development, including reviewing and validating over 400 business requirements, assisting with a smooth transition of over 28 authorization activities, and addressing changes in program business needs such as the addition of new programs. The cost of the requested positions is $494,000 in 2023-24 and $482,000 in 2024-25 and ongoing.

This request includes $5,466,000 in FY 2023-24, $10,931,000 in 2024-25 and 2025-26, and $5,466,000 in 2026-27 for consultants for PAL workload and data cleanup. This request also includes $725,000 in 2023-24 through 2026-27 for a license for a system integrator. Finally, the ongoing project cost for the program is $4,591,000 in 2027-28 and ongoing. All costs are split between GF and AF based on the funding split of the programs that will utilize this system.

Adverse Consequences of the Status Quo:

CDT's approval of the Stage Gate 1 Business Analysis and its ongoing support for the State Gate 2 Alternatives Analysis reinforce the need to replace ET as soon as possible. To summarize, the following ET operational and functional challenges require expeditious resolution to avoid further problems:

- Weak security protocols
- Difficulty in making system changes to accommodate program needs such as minor business process changes or adding new activities
- Lack of system features to prevent the input of inconsistent and unreliable information
- Inability to enforce data business rules
- Inability to share data amongst AHFSS programs
- Lack of compliance-enforcement and case management features
- Reporting and trend analysis capabilities are inadequate or missing
- Online services to the public are inadequate
- Inability to exchange electronic data with stakeholders such as the USDA and other CDFA programs

Failure to have time sensitive and reliable information and data to detect, respond, eliminate, and recover from a food safety incident, animal disease outbreak, or natural disaster can have dire and immediate health and safety concerns for public and animal health, as well as financial and economic consequences. Continued use of the ET system for daily workload activity under the current conditions compromises AHFSS program's ability to collect, manage and report program activities and be prepared to respond to emergencies. Furthermore, the current system lacks effective security features which could lead to unauthorized access to program sensitive information.

E. Outcomes and Accountability

Animal health and food safety are critical components of the infrastructure needed to support a wholesome and healthy community for Californians. The desired and expected outcomes for replacing ET include the following:

- Improve animal disease, food contamination, and natural disaster response time by reducing the number of duplicate core information and implementing better management of demographic information and hence protect diversity and inclusion.
- Improve AHFSS's ability to quickly identify and detect animal disease, food contamination, and natural disasters through enhanced analysis and reporting of inspection and compliance activities by integrating existing mobile application information with program activity information, ensuring equitable access to a safe food supply.
- Protect the health and safety of California agriculture and Californians through enhanced system security and audit trail processes to protect core program data.
- Enhance AHFSS's ability to protect the quality of California's food supply by integrating activity processes such licensing, inspection, sampling, compliance which does not currently exist in ET.
- Enhance customer experience and reduce program inefficiencies by enabling electronic payment for initial and renewal of licensing.
- Reduce risk of food contamination or animal disease outbreaks, ensuring equitable access to a safe and affordable food supply, through more effective inspections and audits by implementing task scheduling for program activities mandates.
- Improve programs early detection of food contamination or animal disease outbreaks by implementing the use of trigger alert for anomalies in inspections and sampling activities which will benefit all communities, especially those in low-income areas or who have been historically disadvantaged.
- Reduce response time to food contamination, animal disease outbreaks, or natural disasters, protecting an equitable, affordable, and safe food supply through improved record retention practices by establishing new automated electronic record retention procedures according to California State Administrative Manuel Chapter 19 guidelines.

The requested funding will be used to fund the PAL process selected contractor to procure and implement the solution and obtain the results identified in the Outcomes identified above. Contractor and Consultant resources will be managed by the CDFA Office of Information Technology Services, with oversight provided by the CDT Project Approval and Oversight division. AHFSS will review and approve contractor and consultant deliverables and timesheets and oversee the approved project budget. Monthly budget and status reports, as well as risk updates

will be provided to CDT and Department of Finance, per DF-576 reporting requirements.

F. Analysis of All Feasible Alternatives

Alternative #1 – Approve CDFA's request for $6,685,000 ($4,212,000 GF and $2,473,000 AF authority and 3.0 positions in FY 2023-24, $12,138,000 ($7,647,000 GF and $4,491,000) in FY 2024-25 and 2025-26, $6,672,000 ($4,204,000 GF and $2,468,000 AF) in FY 2026-27, and $5,073,000 ongoing ($3,196,000 GF and $1,877,000 AF) to complete the activities consistent with the PAL to replace the existing legacy ET system.

Advantages: This alternative will allow CDFA to complete ET replacement, which will result in CDFA having access to time sensitive and reliable information and data to detect, respond, eliminate, and recover from a food safety incident, animal disease outbreak, or natural disaster, which would address dire and immediate health and safety concerns for public and animal health, as well as financial consequences. Continued use of the ET system for daily workload activity under the current conditions compromises AHFSS program's ability to collect, manage and report program activities and be prepared to respond to emergencies. Furthermore, the current system lacks effective security features which could lead to unauthorized access to program sensitive information.

Disadvantages: Increases GF and AF obligation for development and on-going support.

Alternative #2 – Do not approve additional funding to complete the activities consistent with the PAL to replace the existing legacy ET.

Advantages: Does not require additional GF spending and does not place any potential additional fee burden on AF programs.

Disadvantages: California public and animal health will be jeopardized and exposed to the risk of disease and disaster because CDFA will lack the information management tools necessary to prevent, detect, respond to, and recover from accidental or intentional introductions of animal disease and biologic and chemical agents. Failure to have time sensitive and reliable information for all Californian's and data to detect, respond, eliminate, and recover from an animal disease outbreak or food safety incident, as well natural disaster can have dire and immediate health and safety concerns, financial consequences, Potential impacts include multi-billion-dollar losses to the economy and hundreds of millions of dollars in response costs.

G. Implementation Plan

Pending contractor selection and their identified implementation plan, CDT and STP will be involved in the selection of the contractor to ensure the best, meaning low risk and incremental delivery, implementation approach is selected. The project will follow the timeline outlined in the Stage 2 Alternative Analysis, and the system will be complete in FY 2026-27.

H. Supplemental Information

Consultants for PAL and Data Cleanup: $5,466,000

License for System Integrator: $725,000

I. Recommendation

Approve Alternative #1.

BCP Fiscal Detail Sheet

BCP Title: Emerging Threats Information Management System

BR Name: 8570-013-BCP-2023-GB

Budget Request Summary

Personal Services

Personal Services	FY23 Current Year	FY23 Budget Year	FY23 BY+1	FY23 BY+2	FY23 BY+3	FY23 BY+4
Positions - Permanent	0.0	3.0	3.0	3.0	3.0	3.0
Total Positions	**0.0**	**3.0**	**3.0**	**3.0**	**3.0**	**3.0**
Earnings - Permanent	0	256	256	256	256	256
Total Salaries and Wages	**$0**	**$256**	**$256**	**$256**	**$256**	**$256**
Total Staff Benefits	0	169	169	169	169	169
Total Personal Services	**$0**	**$425**	**$425**	**$425**	**$425**	**$425**

Operating Expenses and Equipment

Operating Expenses and Equipment	FY23 Current Year	FY23 Budget Year	FY23 BY+1	FY23 BY+2	FY23 BY+3	FY23 BY+4
5301 - General Expense	0	3	3	3	3	3
5302 - Printing	0	3	3	3	3	3
5304 - Communications	0	5	5	5	5	5
5322 - Training	0	3	3	3	3	3
5324 - Facilities Operation	0	9	9	9	9	9
5340 - Consulting and Professional Services - External	0	6,191	11,656	11,656	6,190	4,591
5346 - Information Technology	0	46	34	34	34	34
Total Operating Expenses and Equipment	**$0**	**$6,260**	**$11,713**	**$11,713**	**$6,247**	**$4,648**

Total Budget Request

Total Budget Request	FY23 Current Year	FY23 Budget Year	FY23 BY+1	FY23 BY+2	FY23 BY+3	FY23 BY+4
Total Budget Request	**$0**	**$6,685**	**$12,138**	**$12,138**	**$6,672**	**$5,073**

Fund Summary

Fund Source

Fund Source	FY23 Current Year	FY23 Budget Year	FY23 BY+1	FY23 BY+2	FY23 BY+3	FY23 BY+4
State Operations - 0001 - General Fund	0	4,212	7,647	7,647	4,204	3,196
State Operations - 0111 - Department of Agriculture Account, Department of Food and Agriculture Fund	0	2,473	4,491	4,491	2,468	1,877
Total State Operations Expenditures	**$0**	**$6,685**	**$12,138**	**$12,138**	**$6,672**	**$5,073**
Total All Funds	**$0**	**$6,685**	**$12,138**	**$12,138**	**$6,672**	**$5,073**

Program Summary

Program Funding

Program Funding	FY23 Current Year	FY23 Budget Year	FY23 BY+1	FY23 BY+2	FY23 BY+3	FY23 BY+4
6570 - Agricultural Plant and Animal Health; Pest Prevention; Food Safety Services	0	6,685	12,138	12,138	6,672	5,073
Total All Programs	**$0**	**$6,685**	**$12,138**	**$12,138**	**$6,672**	**$5,073**

Personal Services Details

Positions

Positions	FY23 Current Year	FY23 Budget Year	FY23 BY+1	FY23 BY+2	FY23 BY+3	FY23 BY+4
5742 - Research Data Spec I	0.0	2.0	2.0	2.0	2.0	2.0
5770 - Research Data Spec III	0.0	1.0	1.0	1.0	1.0	1.0
Total Positions	**0.0**	**3.0**	**3.0**	**3.0**	**3.0**	**3.0**

Salaries and Wages

Salaries and Wages	FY23 Current Year	FY23 Budget Year	FY23 BY+1	FY23 BY+2	FY23 BY+3	FY23 BY+4
5742 - Research Data Spec I	0	160	160	160	160	160
5770 - Research Data Spec III	0	96	96	96	96	96
Total Salaries and Wages	**$0**	**$256**	**$256**	**$256**	**$256**	**$256**

Staff Benefits

Staff Benefits	FY23 Current Year	FY23 Budget Year	FY23 BY+1	FY23 BY+2	FY23 BY+3	FY23 BY+4
5150600 - Retirement - General	0	169	169	169	169	169
Total Staff Benefits	**$0**	**$169**	**$169**	**$169**	**$169**	**$169**

Total Personal Services

Total Personal Services	FY23 Current Year	FY23 Budget Year	FY23 BY+1	FY23 BY+2	FY23 BY+3	FY23 BY+4
Total Personal Services	**$0**	**$425**	**$425**	**$425**	**$425**	**$425**

Parameters	Selected Values
Year	FY23
Department	8570
House	GB Dept Working
BR Name	8570-013-BCP-2023-GB
Run Time	01/06/2023 11:16:53 AM
Last Data Refresh	01/06/2023, 09:59 AM