

STATE OF CALIFORNIA
Budget Change Proposal - Cover Sheet
 DF-46 (REV 03/13)

Fiscal Year 2014-15	BCP No. 2	Org. Code 3960	Department Toxic Substances Control (DTSC)	Priority No. 2
Program 13- Hazardous Waste Management Program			Element	Component

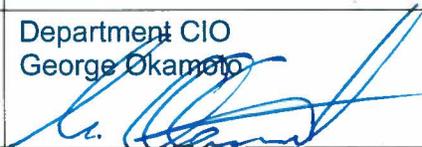
Proposal Title
 Rebuild the Hazardous Waste Tracking System (HWTS)

Proposal Summary

The Department of Toxic Substances Control (DTSC) requests a one-time augmentation of \$1.364 million from the Hazardous Waste Control Account (HWCA) to rebuild the currently outdated Hazardous Waste Tracking System (HWTS). Among other functions, the system provides critical evidence in enforcement actions, and allows DTSC to identify potential violations and mismanagement of hazardous wastes.

The software used to build and operate the system is no longer supported and is a critical obstacle to achieving DTSC's fundamental information management mandates. This augmentation will allow DTSC to continue to track the generation, transportation and disposal of hazardous wastes, and effectively protect public health and the environment.

Requires Legislation <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Code Section(s) to be Added/Amended/Repealed
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Does this BCP contain information technology (IT) components? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <i>If yes, departmental Chief Information Officer must sign.</i>	Department CIO George Okamoto 	Date 1/6/2014
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For IT requests, specify the date a Special Project Report (SPR) or Feasibility Study Report (FSR) was approved by the California Technology Agency, or previously by the Department of Finance.

<input checked="" type="checkbox"/> FSR <input type="checkbox"/> SPR	Project No.	Date:
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If proposal affects another department, does other department concur with proposal? Yes No
 Attach comments of affected department, signed and dated by the department director or designee.

Prepared By Deborah D. Raphael	Date 1/6/14	Reviewed By Sara Benson	Date 1/6/2014
Department Director	Date	Agency Secretary	Date

Department of Finance Use Only

Additional Review: Capital Outlay ITCU FSCU OSAE CALSTARS Technology Agency

BCP Type: Policy Workload Budget per Government Code 13308.05

PPBA	Date submitted to the Legislature
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Fiscal Summary
(Dollars in thousands)

BCP No.	Proposal Title	Program				
2	Hazardous Waste Tracking System (HWTS) Rebuild	13-Hazardous Waste Mgmt.				
Personal Services	Positions			Dollars		
	CY	BY	BY + 1	CY	BY	BY + 1
Total Salaries and Wages ¹						
Total Staff Benefits ²						
Total Personal Services	0.0	0.0	0.0	\$0	\$0	\$0
Operating Expenses and Equipment						
General Expense						
Printing						
Communications						
Postage						
Travel-In State						
Travel-Out of State						
Training						
Facilities Operations						
Utilities						
Consulting & Professional Services: Interdepartmental ³						
Consulting & Professional Services: External ³					1,277	
Data Center Services					87	
Information Technology						
Equipment ³						
Other/Special Items of Expense: ⁴						
Total Operating Expenses and Equipment				\$0	\$1,364	\$0
Total State Operations Expenditures				\$0	\$1,364	\$0
Fund Source	Item Number					
	Org	Ref	Fund			
General Fund						
Special Funds ⁵	3960	001	0014		\$1,364	\$0
Federal Funds						
Other Funds (Specify)						
Reimbursements						
Total Local Assistance Expenditures				\$0	\$0	\$0
Fund Source	Item Number					
	Org	Ref	Fund			
General Fund						
Special Funds ⁵						
Federal Funds						
Other Funds (Specify)						
Reimbursements						
Grand Total, State Operations and Local Assistance				\$0	\$1,364	\$0

¹ Itemize positions by classification on the Personal Services Detail worksheet.

² Provide benefit detail on the Personal Services Detail worksheet.

³ Provide list on the Supplemental Information worksheet.

⁴ Other/Special Items of Expense must be listed individually. Refer to the Uniform Codes Manual for a list of standard titles.

⁵ Attach a Fund Condition Statement that reflects special fund or bond fund expenditures (or revenue) as proposed.

Supplemental Information

(Dollars in thousands)

BCP No. 2	Proposal Title Hazardous Waste Tracking System (HWTS) Rebuild
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Equipment	CY	BY	BY +1
Standard Complement			
Total	\$0	\$0	\$0

Consulting & Professional Services

Contractors -External Contracts	0	1,277	
Independent Project Oversight Consultant		87	
Total	\$0	\$1,364	\$0

Facility/Capital Costs

Total	\$0	\$0	\$0

One-Time/Limited-Term Costs Yes No

Description	BY		BY +1		BY +2	
	Positions	Dollars	Positions	Dollars	Positions	Dollars
External Contracts		1,364		0		0
Total	0.0	\$1,364	0.0	\$0	0.0	\$0

Full-Year Cost Adjustment Yes No

Provide the incremental change in dollars and positions by fiscal year.

Item Number	BY		BY +1		BY +2	
	Positions	Dollars	Positions	Dollars	Positions	Dollars
Total	0.0	\$0	0.0	\$0	0.0	\$0

Future Savings Yes No

Specify fiscal year and estimated savings, including any decrease in positions.

Item Number	BY		BY +1		BY +2	
	Positions	Dollars	Positions	Dollars	Positions	Dollars
Total	0.0	\$0	0.0	\$0	0.0	\$0

Analysis of Problem

A. Proposal Summary

The Department of Toxic Substances Control (DTSC) is requesting \$1.364 million from the Hazardous Waste Control Account (HWCA) to update, rebuild, and improve the Department's currently outdated and unsupported Hazardous Waste Tracking System (HWTS). As it currently operates, it is becoming increasingly difficult for DTSC staff to monitor hazardous waste shipments, authorize generators and transporters, investigate suspected illegal activities, provide copies of manifests as evidence in legal proceedings, research hazardous waste management activities and trends, and audit payments of fees that support the HWMP. Rebuilding and upgrading the HWTS with more current and supported language would: (1) ensure the continued ability to track the generation, transportation, and treatment, storage and disposal of hazardous wastes, (2) increase the number and effectiveness of inspections and enforcement activities, and (3) accomplish other related project objectives.

B. Background/History

HWTS allows DTSC to track hazardous wastes from their point of generation to their ultimate destination, allowing DTSC and other hazardous waste regulatory agencies to verify that hazardous wastes are safely and legally managed. The current version of HWTS, which was last updated in 2002, uses software that is outdated and no longer supported by the software manufacturer. Because it is outdated, one component failure can lead to a breakdown of the entire tracking system. If HWTS were to fail, DTSC would be unable to verify that hazardous wastes were being properly managed. DTSC's ability to monitor hazardous waste management activities and verify the proper management of hazardous waste is an essential element of DTSC's efforts to ensure that public health and the environment are protected from the harmful effects of mismanaged or illegally disposed hazardous wastes.

In addition, because it was last updated in 2002, the capabilities of HWTS no longer meet the needs of DTSC and other regulatory agencies that rely on the information in HWTS. The system tools that use the manifest data need to be updated, improved and provide enhanced capabilities to the users of HWTS.

Over two million tons of hazardous waste are shipped each year by California businesses that, in the course of their business, generate hazardous wastes. This hazardous waste accounts for approximately 450,000 separate shipments from nearly 100,000 generators using 1,000 different transport companies, each year. Pursuant to existing law, all of these shipments must be accompanied by a hazardous waste manifest that is designed to document two things. First, it provides a record of the details of the shipment. Each hazardous waste manifest contains information about the shipment including the type and amount of the waste shipped, the names and contact information for the generator, transporter and destination facility, and how the waste was handled at the destination facility. Second, it provides documentation that the hazardous waste has reached its destination and has been properly and safely treated, stored, or disposed of at a facility that is authorized to receive such shipments. The law requires both the generator of the waste and the receiving facility, to send a copy of the hazardous waste manifest to DTSC. When DTSC has received these two copies, the Department is able to match the information from both the beginning and the end of each shipment.

When DTSC receives each copy of the manifests, it is scanned to create an electronic image and microfilmed to create a permanent record. The information on each copy is also keyed in using a double blind process to reduce data entry errors. Once the data has been verified in this way, it is placed into the Hazardous Waste Tracking System (HWTS). The information from each field on the manifest is critical to the completeness of the record, as well as the document itself, which is signed by all persons that are associated with the shipment (the generator, transporter, and receiving facility). Signatures on the manifest represent and attest that the information is correct and that the hazardous waste has been handled correctly. Information from manifests has been incorporated into the HWTS since 1993.

The information in the HWTS is vital to DTSC's ability to ensure proper management of tremendous volumes of hazardous waste. This data is used to:

1. Verify that hazardous waste that has been generated at each generator location has been handled correctly.

Analysis of Problem

2. Confirm that hazardous waste shipments have reached their intended destination.
3. Validate that generators, transporters, and receiving facilities are complying with the manifesting and reporting requirements.
4. Tally the amount and types of hazardous wastes being handled in California each year.
5. Assess the various hazardous waste fees by the Board of Equalization and by DTSC.
6. Measure, comparing, and analyzing waste management trends over time.
7. Provide evidence in enforcement actions.
8. Identify potential violations and mismanagement of hazardous wastes, allowing for the targeting of investigations and enforcement.

The existing HWTS, which was developed in 2000-02, replaced an earlier version. The current system software is nearing the end of its useful life and increases the risk of system failure. HWTS failure would create significant disruption to DTSC's operations because DTSC would no longer be able to perform the above activities to ensure proper management of hazardous waste.

Hazardous Waste Tracking System Resource History *(Dollars in thousands)*

Program Budget	FY 2009-10	FY 2010-11	FY 2011-12	FY 2012-13	FY 2013-14
Authorized Expenditures	\$335	\$358	\$362	\$376	\$381
Actual Expenditures	\$335	\$358	\$362	\$376	\$381
Authorized Positions	3.0	3.0	3.0	3.0	3.0
Filled Positions	3.0	3.0	3.0	3.0	3.0
Vacancies	0.0	0.0	0.0	0.0	0.0

Workload History

Workload Measure	FY 2009-10	FY 2010-11	FY 2011-12	FY 2012-13	FY 2013-14
Manifests Received	474,000	433,000	442,000	455,000	450,000
Manifests Corrected	7,258	9,951	13,587	14,245	14,352
HWTS Report Use "Hits" by the Public	625,390	677,537	705,283	705,569	774,198
Manifest Related Inspections	98	99	103	92	70
Transporter Inspections	49	49	38	33	27
Completed Criminal Investigations	NA	114	114	91	106

C. State Level Considerations

Restoring the quality of the data in HWTS is one of DTSC's highest priorities and is aligned with DTSC's business strategic plan. Improving data quality within the HWTS aligns with DTSC's 2014-2018 Strategic Plan Goals 2 and 4.

Goal 2: Effectively, efficiently, and fairly administer and enforce California's hazardous waste management laws.

2.6: Implement a new information technology system that improves the availability and accuracy of hazardous waste tracking data for DTSC staff and the public.

Analysis of Problem

Goal 4: Maintain and increase DTSC's organizational and operational capacity, effectiveness, and performance.

4.7: Based on DTSC's strategic goals and objectives, prioritize the recommendations in the information technology strategic plan and begin implementation of the highest priority recommendations.

This proposal is also directly related to DTSC's "Fixing the Foundation Fundamentals," which proposes that DTSC "[i]mplement a new information technology system that improves the availability and usability of hazardous waste management data." It specifically calls for the replacement of the HWTS by October 2015.

This proposal would guarantee continued support for DTSC staff that depends on the HWTS to provide quality data that ensures efficient, effective, and timely results. Safeguarding the quality of the information in the HWTS would allow DTSC and others that use it to be able to, in turn, effectively safeguard the people of California against the improper disposal or handling of hazardous waste.

Impacts on Other Agencies

The HWTS is the primary data system used by the BOE to collect hazardous waste fees. Updating HWTS to reduce data errors and inaccuracies will make it easier for the BOE to accurately assess fees on affected businesses. It can also strengthen their ability to defend their assessments when fee-payers appeal on the basis that their fee liability was inaccurately assessed.

This proposal will also impact local governments through the Certified Unified Program Agency (CUPA) inspectors who depend on the HWTS to identify potential violators. The CUPAs also depend on the HWTS to provide accurate data to prioritize inspection and investigation activities. CUPA inspectors use the data to evaluate the compliance of hazardous waste handlers to ensure that they properly and safely treat, store, or dispose of hazardous waste pursuant to applicable statutes and regulations.

D. Justification

DTSC concludes that the proposed improvements to HWTS would provide the most effective means of tracking and regulating the shipments of hazardous waste throughout California. DTSC's ability to monitor hazardous waste management activities and verify the proper management of hazardous waste is an essential element of DTSC's efforts to ensure that public health and the environment are protected from the harmful effects of mismanaged hazardous wastes. This goal can only be met through rebuilding, upgrading, and enhancing HWTS using current and supported software. System reengineering, automation, and coding efforts will be conducted by the Contractor and existing DTSC IT Staff, as they work side by side throughout all phases of the project.

The \$1.277 million in contractor costs funds a one-year effort to rebuild HWTS and enhance its capabilities. The FSR and Economic Assessment Worksheets provide additional data on the expected roles and classifications of contractor staff, as well as the deliverables, functional requirements, and a schedule for task completion. The California Department of Technology requires an Independent Project Oversight Consultant (IPOC) at a cost of \$87,000, or \$5,800 per month, for the length of the full 15-month project.

E. Outcomes and Accountability

The FSR contains two matrices to trace work activities back to the objectives and business problems. The second matrix provides indicators to use in evaluating performance. The outcomes and objectives DTSC plans to meet through this project are described in detail in the FSR. In summary they are:

1. Enforcement and Hazardous Waste: Conduct two percent more state and local enforcement actions and inspections, conduct two percent more complaint and criminal investigations, and conduct 20 percent more policy research efforts for improved hazardous waste management and support of proposed regulations through enhanced HWTS functionality. (1/1/2017)

Analysis of Problem

2. Transporters: Improve the regulation of transporters by providing state and local enforcement staff—and the 100,000 businesses that ship waste, with accurate data regarding the status of approximately 1,000 registered transporters. Reduce the use of unregistered or expired transporters by 40 percent, create the ability to obtain compliance with consolidated transporter requirements (i.e. submittal of accurate information on time and for only authorized waste), and provide inspectors with electronic confirmation of required insurance policy coverage. (10/1/2016)
3. Revenues: Increase hazardous waste revenues collected by two percent by DTSC and the Board of Equalization and improve the efficiency of the fee collection process. Increase cost recovery efforts for cleanups at facilities that formerly manifested hazardous waste by two percent. (10/1/2016)
4. Data Quality: Decrease the number of annual manifests with uncorrected errors in the HWTS by 90 percent (from 45,000 uncorrected errors per year to no more than 4,500 per year). (10/1/2016)
5. Reports: Develop sophisticated reports to:
 - a. Provide significantly-improved access to data for approximately 250 governmental users, as well as the public, through both custom ad hoc reports. This will eliminate current wait times of up to of up four months to access current data through DTSC data analyst assistance. (10/1/2015)
 - b. Implement a web-based system that directly links to manifest data. This will streamline the biennial report process, thereby benefitting 2,500 businesses and DTSC. This measure will also increase data accuracy and completeness by 30 percent. (6/1/2016)
 - c. Expand capability of managing consolidated transporters by identifying all missing reports (15 percent) and provide new reports to support the CUPAs' compliance efforts for the 50,000 generators whose waste shipments in the Transporter Quarterly Report and are not in the HWTS. (10/1/2016)

In order to meet these outcomes, the contractor would provide a mix of specialists, which would include a system architect, a project manager, software developers, and business analysts.

The contractor, working together with DTSC staff, would perform the following tasks and incorporate the needed design specifications:

Requirements and Design

- Detailed system requirements and process fit/gap analysis.
- Solution architecture and design.
- Work with HWTS users to understand needs and current usage.

Development

- Automation of manual processes.
- Coding and development in updated technology and reporting platforms.

Implementation

- Incremental development approach allowing testing of various modules

Deployment

- Business process integration/ facilitation.
- Organizational change management facilitation.
- Creation of training tutorial.

HWTS Automation

- Online services for Generators / Transporters, and TSDf to see and correct their manifests on demand.
- Online payments for manifest error correction.
- Online accounts for Generator, Transporter, and TSDf's.

Analysis of Problem

F. Analysis of All Feasible Alternatives

Alternative 1: Augmentation of \$1.364 million to rebuild and upgrade the HWTS utilizing a contractor using a current, supported language, to ensure the continued ability to track the generation, transportation, and disposal of hazardous wastes.

Pros:

- Provides a stable, reliable, and enhanced HWTS
- Contractor resources are needed because DTSC IT personnel are not equipped with the required skill set to perform all required work.
- A contractor would be more versed in updated technology platforms and DTSC staff would benefit from knowledge-sharing and current best-practices in the IT world.
- DTSC staff will train on the newer software and technologies in order to work with more proficient contractor personnel. DTSC IT staff will work side by side with the contractor and become very familiar with new system and business requirements, which should result in lower costs for on-going maintenance support.
- With an enhanced system, DTSC anticipates lower on-going maintenance and future enhancement costs, which will allow HWTS IT maintenance staff to be reduced from three positions to two positions. This savings will be used to fund unmet needs for other hazardous waste data projects that are not related to the HWTS rebuild.
- Provides HWTS users with a modern, enhanced system in 15 months, which is faster than DTSC IT staff could accomplish it alone. A contractor would also bring a fresh perspective to the HWTS and, through Business Analysts, provide more focus on the specific needs and how best to meet them. The contractor will be able to complete the project in one year, while existing DTSC IT resources would take longer.

Cons:

- Contractor cost and coordination.
- A contractor could fail to follow through and contract revisions could delay start of the project.
- A contractor's detailed knowledge about the coding may not be fully understood by DTSC IT personnel before the end of the contract.
- DTSC IT and program staff would need to devote sufficient effort to support the one-year schedule. If unavailable, the contractor's work could be delayed.

Alternative 2: Rebuild and upgrade HWTS within three-years using existing DTSC IT staff resources (four PY per year).

Pros:

- DTSC's IT personnel are familiar with HWTS, its operation, its business customers and system requirements, and the data it contains.
- Would require no new resources: HWTS IT personnel are already budgeted.

Cons:

- Costs for this alternative would likely be higher than the preferred alternative depending on the amount of staff time actually needed to complete the entire project scope.
- The HWTS rebuild and upgrades would be delayed up to two years more than the contractor conducted alternative to account for the reduced resources available to complete the project.

Analysis of Problem

- Would require one IT PY to be redirected from other high priority IT projects, causing project delays for other programs needing IT support.
- Would redirect the existing IT staff assigned to HWTS that ensure it continues to function at its current level. Any interruption in HWTS functionality for the duration of the project would either remain unaddressed or would further delay the proposed project as staff respond to the interruption to reestablish temporary functionality.

Alternative 3: Have DTSC adopt and modify a similar system that other states have in use. This alternative would require learning the adopted system and modifying it to fit DTSC's functional needs, since each state system serves different functional needs.

Pros:

- Adopting a similar system from another state would be an ideal solution as long as it meets our complex functional needs.

Cons:

- DTSC is not aware of other states that have a robust system that can handle a complex process in handling hazardous waste management to meet the HWTS' functional needs.
- Due to time constraints, we have concluded there is no viable way to convert an existing system used by another state for California's purposes.

Alternative 4: Do Nothing

Pros:

- Lower cost and single focus on reporting upgrade.
- Focus will be solely on the reporting functions which will free resources for other projects.

Cons:

- Other HWTS components will continue to operate on obsolete, unsupported technologies. One component failure can lead to a system breakdown. This places DTSC at significant risk, because the HWTS can fail at any moment and, if this were to happen DTSC would be unable to monitor shipments, authorize generators and transporters, investigate suspect activities, provide manifest evidence in court cases, research hazardous waste management activities and trends, or audit payments of fees that support the HWMP. DTSC's ability to fulfill its hazardous waste mission would also be significantly hindered.
- The issues of data quality, integrity, and potential harm to citizens would continue. Other user-requested enhancements such as online systems and fee paying would not be developed.
- Would lead to dissatisfied stakeholders and customers.

G. Implementation Plan

The contract period is from July 1, 2014 to September 30, 2015. DTSC staff would continue to support and evaluate implementation after that date range. The following timeline shows the general tasks and an estimate of elapsed time assigned to each task.

Analysis of Problem

TIMELINE

Task Name	Duration (Elapsed Time)	Start	Finish
HTWS Rewrite and upgrade	688 days	7/1/14	2/16/17
Project Planning	45 days	7/1/14	9/1/14
Procurement (for Contractor)	45 days	7/1/14	9/1/14
Contracting	30 days	8/19/14	9/29/14
Contractor to Begin Providing Services	0 days	10/1/14	10/1/14
Rewrite and Upgrade Existing HWTS components (Contractor and State Staff)	255 days	10/2/14	9/23/15
Requirements	65 days	10/2/14	12/31/14
Technical Design	40 days	12/11/14	2/4/15
Development	125 days	2/5/15	7/29/15
Test	100 days	3/12/15	7/29/15
Implement	40 days	7/30/15	9/23/15
Project Close-out	6 days	9/24/15	10/1/15
Support	260 days	10/2/15	9/29/16
Post Implementation Evaluation Report	11 days	2/2/17	2/16/17

H. Supplemental Information (Check box(es) below and provide additional descriptions.)

None
 Facility/Capital Costs
 Equipment
 Contracts
 Other _____

This proposed budget requests \$1.364 million one-time in contracts to update, rebuild and improve the Department's currently outdated Hazardous Waste Tracking System (HWTS)

I. Recommendation

DTSC recommends Alternative 1 for DTSC to rebuild and upgrade the HWTS in a current, supported language, to ensure the continued ability to track the generation, transportation, and disposal of hazardous wastes, and to accomplish the other identified project objectives. The rebuild and upgrade would be done with internal IT staff and contracted services.

The proposed solution provides the most effective means of meeting the Department's mission to protect California's people and environment from harmful effects of toxic substances through the restoration of contaminated resources, enforcement, regulation, and pollution prevention.

Budget bill language:

3960-001-0014

Provision 2: Notwithstanding any other provision of law, of the funds appropriated in this item, up to \$1,364,000 is available to fund Hazardous Waste Tracking System replacement costs subject to the approval of a Special Project Report by the California Technology Agency and the Department of Finance. These funds are available for expenditure or encumbrance until June 30, 2016.