HB15-1129

Colorado Legislative Council Staff Fiscal Note

STATE and LOCAL FISCAL IMPACT

Drafting Number:	LLS 15-0277	**Date:**	February 5, 2015
Prime Sponsor(s):	Rep. Kraft-Tharp Sen. Roberts	**Bill Status:**	House Agriculture
		Fiscal Analyst:	Alex Schatz (303-866-4375)

BILL TOPIC: CO DISASTER PREDICTION & DECISION SUPPORT SYSTEMS

Fiscal Impact Summary*	FY 2015-2016	FY 2016-2017	FY 2019-2020
State Revenue Cash Funds	Potential increase. See State Revenue section.		
State Expenditures	**$2,284,872**	**$2,397,229**	**$2,397,229**
General Fund	2,232,904	2,329,754	2,329,754
Centrally Appropriated Costs**	51,968	67,475	67,475
FTE Position Change	3.5 FTE	4.5 FTE	4.5 FTE
TABOR Set-Aside	Potential increase.		
Appropriation Required: $2,232,904 - Department of Public Safety (FY 2015-16)			

** This summary shows changes from current law under the bill for each fiscal year.*
*** These costs are not included in the bill's appropriation. See the State Expenditures section for more information.*

Summary of Legislation

This bill requires two divisions of the Department of Public Safety (DPS) to develop decision-support systems to predict certain disasters:

- The Division of Fire Prevention and Control (DFPC) is required to contract for the development of the Colorado Wildland Fire Prediction and Decision Support System. The capabilities of this system must include prediction of wildland fire conditions and aviation weather hazards that affect the state aerial firefighting operations.

- The Division of Homeland Security and Emergency Management (DHSEM) is required to contract for the development of the Colorado Flood Prediction and Decision Support System. This system must improve current flood prediction capabilities in the DHSEM.

The DFPC and DHSEM must contract with a nonprofit or tax-exempt Colorado-based research organization with expertise in atmospheric science and certain related qualifications. Both contracts are exempt from the State Procurement Code and must be entered into by December 1, 2015. Both contracts also have certain technical and performance requirements, such as the automated acquisition of real-time weather and fire fuel information. While under contract, the DFPC and DHSEM are required to coordinate with governmental end users across the state to refine requirements for the decision-support systems.

Both the DFPC and DHSEM may solicit and accept in-kind donations or monetary gifts, grants, and donations for their respective decision-support systems. Moneys received by the DFPC are deposited in the Colorado Firefighting Air Corps Fund, and moneys received by the DHSEM are deposited in the Disaster Emergency Fund. Monetary donations to these cash funds are continuously appropriated for costs of implementing the bill.

Background

In the 2014 legislative interim, the Wildfire Matters Review Committee received information from senior staff and scientists employed by the University Center for Atmospheric Research/National Center for Atmospheric Research (UCAR/NCAR) concerning a coupled weather-wildland fire behavior prediction technology. Known as CAWFE, the fire prediction model has been tested by comparing predicted fire behavior to actual conditions in recent Colorado wildfire events. Based on the results of these tests, researchers believe the model is sufficiently advanced to develop applications based on CAWFE. Within the scope of its research, UCAR/NCAR has also developed hydrometeorological (flood) prediction technologies.

State Revenue

Beginning in FY 2015-16, the DPS may receive gifts, grants, and donations for the purposes of the bill, potentially increasing state revenue to the two cash funds identified in the bill. No source of gifts, grants, and donations has been identified at the time of this writing.

TABOR Impact

To the extent that this bill increases state revenue, it will increase the amount required to be refunded under TABOR. TABOR refunds are paid from the General Fund.

State Expenditures

The bill increases state expenditures by **$2,284,872 and 3.2 FTE in FY 2015-16** and by **$2,397,229 and 4.5 FTE in FY 2016-17**. These costs are incurred by the DPS and the Office of Information Technology (OIT). Costs similar to FY 2016-17 are expected through FY 2019-20. The bill has long-term costs in FY 2020-21 and future fiscal years, and also impacts workload and potentially costs in other state agencies starting in FY 2015-16.

Assumptions. This analysis of state expenditures to implement the bill incorporates the following assumptions:

- The decision-support systems for both DFPC and DHSEM will utilize the modeling and statistical analysis developed by federal laboratories, as described in the Background section.

- Development of a fully operational decision-support system will take five years. Project definition and strategy occupies most of FY 2015-16. Migration to state computers and OIT administration does not begin until FY 2016-17.

- The contractor's compensation includes all direct and indirect costs. The contract for development of a decision-support system is not subject to additional fees or charges.

- During the development of a decision-support system, the access of end users will be limited. In each year of development, more access and capabilities are expected for end users. However, other than direct costs of development to the DPS (including OIT support), the fiscal note does not account for operational costs or savings that end users may incur as a result of complete, successful implementation of the decision-support systems.

- The bill is financed through the General Fund. To the extent that cash funds or in-kind donations are received, these may partially offset General Fund expenditures. The annual budget process will account for any funding adjustments.

Table 1. Expenditures Under HB 15-1129

Cost Components	FY 2015-16	FY 2016-17
Department of Public Safety	*$2,070,040*	*$2,061,690*
Personal Services	130,913	130,913
FTE	1.5	1.5
Operating Expenses and Capital Outlay	16,831	7,425
UCAR/NCAR Contract	1,900,000	1,900,000
Centrally Appropriated Costs*	22,296	23,352
Office of Information Technology	*$214,832*	*$335,539*
Personal Services	173,854	232,363
FTE	2.0	3.0
Operating Expenses and Capital Outlay	11,306	20,053
Contractual services	0	39,000
Centrally Appropriated Costs*	29,672	44,123
TOTAL**	**$2,284,872**	**$2,397,229**

** Centrally appropriated costs are not included in the bill's appropriation.*

Department of Public Safety. The DPS must coordinate two related contracts to implement this bill. A full-time scientist and half-time project manager will be hired by the DPS to ensure compliance with the bill, coordinating all affected parties including the contractor, OIT, and other governmental end users. In FY 2015-16 and future fiscal years, these DPS employees will require standard operating costs and a travel budget to fulfill their duties.

Detailed development of the decision-support systems, training materials, and other technical requirements will be the responsibility of the contractors selected by the DFPC and DHSEM. Contract expenditures are estimated at $950,000 annually for each division. Approximately half of this annual contractual budget ($450,000) is devoted to software engineering. The remaining amount covers the contractor's charges for fire or flood modeling science ($350,000), project management ($40,000), verification and validation ($40,000), system integration and installation ($60,000), and miscellaneous costs, including supplies and travel ($10,000).

The annual appropriations estimated for DPS will continue at the FY 2016-17 level, adjusted for annual changes in cost assumptions, until FY 2019-20. In FY 2019-20, the decision-support systems will be complete and fully operational in the DFPC and the DHSEM. Continued operation of the decision-support system in FY 2020-21 and future fiscal years is subject to the long-term costs discussed below.

Office of Information Technology. The DPS will receive assistance from OIT for information technology (IT) development consistent with state standards and the integration of decision-support systems with other existing and planned state IT systems. During the first year of the project, FY 2015-16, OIT's role will be to familiarize the DPS and contractor with state IT systems, available data, and user needs from OIT's perspective. In FY 2016-17 and future fiscal years, OIT will incur additional costs to actively support users and host the decision-support systems. Costs summarized in Table 1 include the following:

Starting in FY 2015-16
- 1.0 FTE for a business analyst to assist the DPS with project management.
- 1.0 FTE for a geographic information systems (GIS) professional.

Starting in FY 2016-17
- 1.0 FTE for an IT technician to provide end user support.
- Additional costs for disk storage and 1,000 hours of services from a contract software test engineer.

Additional work over the course of decision-support system development will be accomplished using existing resources at OIT. This includes assistance with project definition and contractor selection, IT security, and the deployment of software. No change in appropriations is required for this additional work by OIT.

Other state agencies. State agencies that are end users of either decision-support system will experience a minimal workload increase to contribute specifications and other input to the design and testing of the new systems. It is anticipated that the Department of Natural Resources, the Department of Transportation, and the Department of Military and Veterans Affairs may have a sufficient interest in disaster prediction and risk assessment to contribute to this process. No change in appropriations is necessary for these other state agencies.

Long-term costs. Once a decision-support system is fully operational, there will be ongoing costs for personnel trained to use and maintain the system, including personnel to refresh data (e.g.,built improvements, weather, snowpack, population, etc.) on a regular basis. Maintenance of the systems also involves long-term costs for information technology infrastructure, including high-performance computation and its physical interface.

A technology transfer plan will be necessary no later than the fourth year of development. The modeling and statistical analysis upon which the decision-support systems will be based is federal intellectual property, subject to licensing to the state and its end users. Once implemented, upgrades and support for the decision-support systems are likely to depend on some amount of continued federal cooperation and resources.

Centrally appropriated costs. Pursuant to a Joint Budget Committee policy, certain costs associated with this bill are addressed through the annual budget process and centrally appropriated in the Long Bill or supplemental appropriations bills, rather than in this bill. The centrally appropriated costs subject to this policy are estimated in the fiscal note for informational purposes and summarized in Table 2.

Table 2. Centrally Appropriated Costs Under HB 15-1129*		
Cost Components	**FY 2015-16**	**FY 2016-17**
Employee Insurance (Health, Life, Dental, and Short-term Disability)	$28,346	$36,388
Supplemental Employee Retirement Payments	23,622	31,087
TOTAL	**$51,968**	**$67,475**

**More information is available at: http://colorado.gov/fiscalnotes*

Local Government Impact

As anticipated end users of the decision-support systems, the input of emergency responders, road and bridge departments, and other local government officials is essential to the development of these systems. Starting early 2016, the workload of affected local governments is expected to increase as their feedback is solicited by the state and its vendor.

Effective Date

The bill takes effect upon signature of the Governor, or upon becoming law without his signature.

State Appropriations

The bill includes a General Fund appropriation totaling $2,000,000 to the Department of Public Safety.

For FY 2015-16, the bill requires a General Fund appropriation of $2,232,904, and an allocation of 1.5 FTE, to the Department of Public Safety. Of the amount appropriated to the Department of Public Safety, $185,160 is reappropriated to the Office of Information Technology. The Office of Information Technology requires an allocation of 2.0 FTE.

State and Local Government Contacts

Public Safety	Office of Information Technology	Higher Education
Local Affairs	Office of State Planning and Budgeting	Natural Resources
Governor	Personnel and Administration	Sheriffs