



**Colorado  
Legislative  
Council  
Staff**

**HB17-1070**

**REVISED  
FISCAL NOTE**

(replaces fiscal note dated February 13, 2017)

**FISCAL IMPACT:**  State  Local  Statutory Public Entity  Conditional  No Fiscal Impact

**Drafting Number:** LLS 17-0435  
**Prime Sponsor(s):** Rep. Wilson

**Date:** February 23, 2017  
**Bill Status:** House Appropriations  
**Fiscal Analyst:** Chris Creighton (303-866-5834)

**BILL TOPIC:** STUDY DRONE USE BY PUBLIC SAFETY AGENCIES

Fiscal Impact Summary	FY 2017-2018	FY 2018-2019
<b>State Revenue</b> Cash Funds	Gifts, Grants, and Donations.	
<b>State Expenditures</b> Cash Funds	<b>up to \$836,328</b> up to 836,328	Workload increase.
<b>Appropriation Required:</b> None.		
<b>Future Year Impacts:</b> None.		

**Summary of Legislation**

This bill, *as amended by the House Judiciary Committee*, requires the Center of Excellence for Advanced Technology and Aerial Firefighting (Center of Excellence) in the Department of Public Safety to conduct a study on the use of unmanned aircraft systems (UAS) within state and local government firefighting operations. This bill also creates a UAS pilot program and authorizes the Department of Labor and Employment to provide resources for the training and development of eligible pilot program members. On or before September 1, 2018, the results of the study and the pilot program are to be submitted to the Wildfire Matters Review Committee and the Judiciary committees of the General Assembly. Both the study and the pilot project are conditional upon receipt of sufficient gifts, grants, and donations.

**Background**

The Center of Excellence is part of the Division of Fire Prevention and Control in the Department of Public Safety and was created by Senate Bill 14-164. The center researches, tests, and evaluates new and existing technologies that support sustainable, effective, and efficient aerial firefighting techniques. UAS, often called drones, are aircraft that are controlled from the ground and do not have a human pilot on board. This analysis assumes both the study and pilot program will need to be completed in FY 2017-18 to allow for enough time to compile the results and prepare a report for the General Assembly by September 1, 2018.

**State Revenue**

This bill increases state cash fund revenue in the Colorado Firefighting Air Corps Fund by authorizing the Center of Excellence to seek gifts, grants, and donations. Gifts, grants, and donations are exempt from TABOR. No amount of monetary gifts, grants, and donations has been identified.

**State Expenditures**

Conditional upon the receipt of sufficient gifts, grants, and donations, for FY 2017-18 only, this bill increases state cash fund expenditures to the Department of Public Safety by \$836,328 as shown in Table 1. Workload is also increased in the departments of Public Safety, Labor and Employment, Natural Resources, and Local Affairs. These impacts are discussed below.

<b>Table 1. Expenditures Under HB17-1070</b>	
<b>Cost Components</b>	<b>FY 2017-18</b>
Temporary Personal Services	\$193,848
Operating Expenses and Capital Outlay Costs	26,000
Training	50,000
Lodging and Per Diem	64,950
Platform Equipment	up to 250,000
Payload Equipment	up to 150,000
Vehicle/Platform Control Center	101,530
<b>TOTAL</b>	<b>up to \$836,328</b>

**Pilot Program UAS Operators and Training.** This bill increases expenditures in the Center of Excellence in FY 2017-18 to hire four temporary firefighters to serve as pilot program UAS operators for nine months. Firefighters are needed because UAS training in the pilot program is required in various firefighting contexts including search and rescue, emergency management, and tactical operations. Operating and capital costs for computers and special software estimated at \$26,000.

The four temporary positions will receive a variety of training including, UAS certification, large and small platform training to ensure proper UAS usage, and public safety incident management training. The full cost of this training is expected to be \$50,000 and includes travel and accommodations.

**Lodging and Per Diem.** The pilot program requires deployment of pilot system operators to a region in the state that has been designated as a fire hazard region to train the operators and perform UAS incident response testing. Lodging and per diem costs for the four temporary positions and two Center of Excellence employees during periods of deployment are estimated at \$64,950. This includes 50 nights of lodging and 75 days of per diem.

**Platforms and Payloads.** The Center of Excellence requires multiple platforms and payloads to complete the pilot program. A platform is the UAS itself. Up to eight platform types will be purchased and used to train the UAS operators, test the integration of UAS in a variety of

public safety operations, and determine which platforms are best suited for firefighting applications. Platform costs vary greatly depending on the type of platform from under \$100 to up to \$300,000. Based on initial quotes, this analysis estimates up to eight different platform types can be purchased at a total cost of up to \$250,000. Additionally up to \$150,000 is needed to purchase a variety of UAS payload equipment. Payloads are UAS add-ons such as infrared cameras or 3D mapping capabilities and will be used to determine which payloads are most effective in firefighting operations. The actual cost of this equipment is subject to the results of the procurement process.

To the extent that equipment and other in-kind donations are received by the Center of Excellence, pilot project costs will be decreased.

**Vehicle/Platform Control Center.** In order to transport this equipment and the UAS operators to fire hazard regions and to perform mobile platform control and data collection the Center of Excellence will need to purchase a vehicle. Because remote fire hazard regions will be accessed a four wheel drive van is needed at an estimated cost of \$56,530. This van will be retrofitted into a mobile command center. This retrofitting will cost an estimated \$45,000 and includes a roof rack, off-road tires, tables, cabinets, additional power supply, radio's, and special lighting for a total cost of \$101,530. Funds to cover the cost of this vehicle will be reappropriated to the Department of Personnel and Administration which manages the state fleet of vehicles.

**Department of Public Safety.** Workload is increased in the Department of Public Safety in FY 2018-19 to compile the results of the study and pilot program and submit a report to the General Assembly.

**Department of Labor and Employment.** This bill authorizes the Division of Employment and Training to provide resources for the training and development of eligible pilot program candidates. This may result in additional workload, however since training is already provided by the division at local workforce centers no increase in appropriations is expected. Should the pilot study determine that increased training resources are needed, appropriations will be requested through the annual budget process.

**Department of Natural Resources.** For FY 2017-18, workload will increase in the Department of Natural Resources to participate in the study. This workload can be accomplished within existing appropriations. It is assumed that the department will also participate in the pilot program and workload and costs will increase for such participation, however the extent of this participation is unknown at the time. Should participation in the pilot program require additional resources, the department will request them through the annual budget process.

**Department of Local Affairs.** The results of the study and pilot program will potentially increase the number of requests for UAS search and rescue cost reimbursement from the Colorado Search and Rescue Fund. This fund is managed by the Division of Local Government. Any increase in requests will increase workload to verify costs and determine reimbursement amounts. Any increase in workload can be accomplished within existing appropriations.

## Local Government Impact

Local government workload will increase for local agencies to participate in the study. Workload and costs further increase for local agencies that participate in the pilot program. The impact on these agencies is unknown and depends on the level of participation.

**Effective Date**

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

**State and Local Government Contacts**

Counties  
Fire Chiefs  
Information Technology  
Labor  
Local Affairs

Municipalities  
Natural Resources  
Personnel and Administration  
Public Safety