



COLORADO

Colorado Water Conservation Board

Department of Natural Resources

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TO: Colorado Water Conservation Board Members

FROM: Thuy Patton, Floodplain Mapping Coordinator,
Watershed Protection & Flood Mitigation Section

DATE: November 15-16, 2017 Board Meeting

AGENDA ITEM: 7a. 2018 Projects Bill
Non-Reimbursable Project Investments
(12) Colorado Lidar Data Acquisition Program

Introduction

Colorado has received approximately \$3.4 million in federal grant dollars for elevation data acquisition activities to support the Floodplain Map Modernization/Risk Map Program in Colorado. High quality topographic data is necessary to develop accurate FEMA flood hazard mapping. The 3D Elevation Program (3DEP) was developed to respond to a growing need for high quality topographic data nationwide. The primary goal of 3DEP is to systematically collect 3D elevation data in the form of light detection and ranging (lidar) across the U.S over an 8-year period. Lidar technology has many uses and is utilized across many different industries. The CWCB can leverage FEMA and State funds to obtain additional USGS funding through 3DEP. This Program requires a 25% non federal cost share for acquisition projects in order to receive USGS matching funds up to 50% of the total cost of the projects.

Similar to the FEMA Map Modernization Program where the CWCB has leveraged millions of federal dollars for floodplain mapping in Colorado, this is a rare opportunity to leverage additional federal funds with State dollars and provide communities across the State with up to date, accurate elevation data that can be utilized for a multitude of purposes.

Staff Recommendation

Staff recommends the Board request the General Assembly to appropriate \$200,000 from the Construction Fund to the Department of Natural Resources for allocation to the CWCB to provide communities across the State with up to date, accurate elevation data that can be utilized for a multitude of purposes including floodplain mapping efforts.





Colorado Lidar Data Acquisition Program

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November 2017 Board Meeting

Colorado has received approximately \$3.4 million in federal grant dollars for elevation data acquisition activities to support the floodplain Map Modernization/Risk Map Program in Colorado. High quality topographic data is necessary to develop accurate FEMA flood hazard mapping. Additionally, the Colorado Hazard Mapping program relies on high quality elevation data for debris flow mapping and fluvial hazard mapping. The FEMA funds can be leveraged through the U.S. Geological Survey (USGS) 3DEP Program (3D Elevation Program).

P R O J E C T D E T A I L S	
<i>Project Cost:</i>	\$3,400,000
<i>NRI Funding Request:</i>	\$200,000
<i>Funding Source:</i>	Construction Fund
<i>Project Type:</i>	Matching Funds for Grants
<i>Type of Grantee:</i>	State Government

L O C A T I O N	
<i>Benefits:</i>	Statewide
<i>Water Source:</i>	Various
<i>Drainage Basin:</i>	All Basins

The 3DEP Program (Program) was developed to respond to a growing need for high quality topographic data nationwide. The primary goal of this Program is to systematically collect 3D elevation data in the form of light detection and ranging (lidar) across the U.S over an 8-year period. Lidar technology has many uses and is utilized across many different industries. In addition to floodplain mapping, other examples of lidar uses include determining forest biomass, measuring snow pack, transportation planning, identification of reclamation mining sites, and geohazard mapping.

The Program is a unique opportunity for collaboration between all levels of government and to leverage services and expertise of private sector mapping firms to acquire the data. The CWCB has been contacted by several local, State, and Federal organizations, including San Miguel County, Town of Castle Rock, City of Boulder, CDOT, Colorado Geological Survey (CGS), Division of Reclamation and Mining Services (DRMS), and the U.S. Forest service, with great interest in partnering on future lidar acquisitions in Colorado. The CWCB can leverage FEMA and State funds to obtain USGS funding through the 3DEP Program. This Program requires a 25% non federal cost share for acquisition projects in order to receive USGS matching funds up to 50% of the total cost of the projects.

Similar to the FEMA Map Modernization Program where the CWCB has leveraged millions of federal dollars for floodplain mapping Colorado, this is a rare opportunity to leverage additional federal funds with State dollars and provide communities across the State with up to date, accurate elevation data that can be utilized for a multitude of purposes.