### MAPPING FOR RESILIENCE: A STORYMAP ABOUT USING LIDAR TO ADDRESS IDAHO'S CHALLENGES

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## PRESENTATION OVERVIEW

## Case study

Lidar fundamentals: Lidar Context and usage in the Geospatial Community and Data Collection and Processing
Lidar applications Lidar Utility and Application

Lidar acquisition: Wishlist and Additional Resources LidART

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# CLEARWATER RIVER BASIN







Image credit: Jacob W. Frank, National Park Service



## First USGS 3D Elevation Program project in Idaho

Lidar aquisition covered **seven counties** in Idaho and Washington

Total contributions over \$930,000 with more than a **dozen partners** 

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## **Objectives:**

1. Assess current uptake of lidar for flood risk management

2. Identify factors that promote and constrain the use of lidar by municipal officials

3. Increase uptake of lidar for flood risk preparedness, planning, and adaptation



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**BSU CTP Team** 



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### BOISE STATE UNIVERSITY

**Welcome to the Technology Adoption** in Flood Risk Management Survey!

The purpose of this survey is to better understand how managers make decisions about flood risk management. You have been identified as a knowledgeable member of the industry who could provide information for our study. This survey will ask about you, the community you work in, and your use of lidar (Light Detection and Ranging) in flood risk management. Your response will contribute to our understanding of the role lidar plays in flood risk management, and help us identify barriers that may exist in its implementation.

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## LIDAR AREAS OF INTEREST

### LIDAR FUNDAMENTA LS

LIDAR APPLICATIONS





















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### 2000

USGS National Elevation Dataset (NED) provides publically-accessible 10-meter and 30-meter topographic data in Idaho.



USGS establishes 3D Elevation Program (3DEP), the first nationally-coordinated lidar acquisition program with a goal of having the complete lidar coverage of the US by 2023 given adequate funding.

### 2018

Idaho Lidar Statewide Acquisition Plan was created to establish an approach to acquire publically-available statewide lidar data and lidar-derived products for Idaho by 2026.

25% (24,000 sq. miles) of the state is covered with lidar data.

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### 2010



### 2013

Idaho Lidar Consortium (ILC) is founded to provide a repository for publicallyavailable lidar, as well as a resource for state-level lidar coordination and acquistion in Idaho.

### 2020



### 2021

An additional 56% (47,000 sq. miles) of the state will be mapped (some remapped) amounting to 73% (60,783 sq. miles) of the state covered with lidar.







### 2018 COVERAGE

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### PROJECTED 2021 COVERAGE

## LIDAR APPLICATIONS

APPLICATION	EXAMPLE(S)
Wildlife and habitat management	Aerial viewsheds
Riverine ecosystem management	Channel migration, sediment tra
Geologic assessment	Landslides, earthquakes
Flood risk management	Floodplain remapping
Wildfire management	Wildland-Urban Interface model debris flow
Forest resource management	Forest road alignment
Water supply and quality	Hydrogeomorphology

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	CONTRIBUTORS
	Rachel Stein, University of Idaho Graduate Research Assistant; Janet Rachlow, University of Idaho Professor of Wildlife Ecology
nsport	Jason Wright, USFS Transportation Planner; Andy Tranmer, University of Idaho Assistant Professor at the Center for Ecohydraulics Research
	Jason Wright, USFS Transportation Planner; Zach Lifton Idaho Geological Survey Hazards Geologist
ing, post-fire	Keith Weber, ISU GIS Director
	Jason Wright, USFS Transportation Planner
	Tyler King, USGS Hydrologist



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Publicly-available lidar data: idaholidar.org

Lidar troubleshooting: Idaho Lidar Consortium and ISU's

Lidar community:

1. Join Idaho GIS listserv for the most up-to-date information on educational and networking opportunities in the GIS community.

2. Join the <u>Elevation Technical Working Group</u> (ETWG) to be part of a community that works with elevation data products through the state of Idaho.





### PROMOTING FLOOD AWARENESS THROUGH COMPELLING VISUALS

# LIDART







TO LEARN MORE: <u>HTTPS://WWW.ANTHROPOSPHERE.CO.UK/PC</u> <u>ANCESTORS-OF-A-RIVER</u>

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# QUESTIONS?

