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ALIGNING YOUR GIS EFFORTS WITH FEDERAL STIMULUS FUNDING

MOVING THE NATION FORWARD WITH GIS

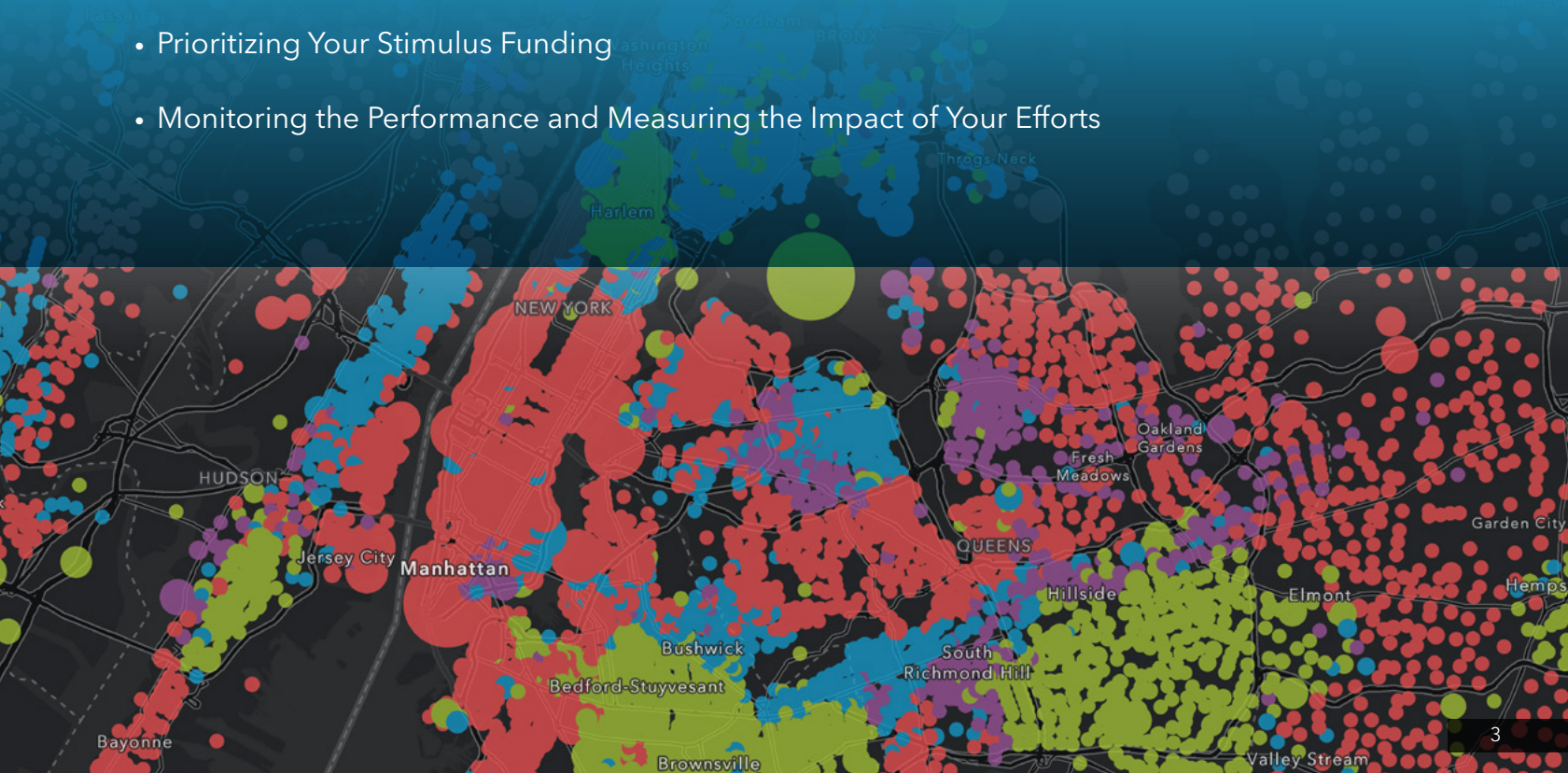
PROGRESSING THE HEALTH, ECONOMY, INFRASTRUCTURE, AND EQUITY OF OUR COMMUNITIES

Oftentimes, the federal government is called on to provide leadership and funding to state and local governments and not-for-profit organizations to uplift their efforts during challenging times. Stimulus programs and, most recently, the Coronavirus Aid, Relief, and Economic Security (CARES) Act of 2020 and the American Rescue Plan Act of 2021 (ARPA), provide a road map for state and local governments to thrive during the recovery from the tumultuous last couple years. Geographic information system (GIS) technology provides the tools and insight for a resilient recovery. The American Recovery Plan provides the opportunity to use GIS for a resilient recovery.

Communities are reopening after the historic COVID 19 pandemic. Through the American Rescue Plan funding and direction, state and local governments have been afforded an opportunity to create healthy environments, support economic growth, and remove barriers to mobility. GIS provided insights to carry the world through the crisis. A geographic approach can provide insights into investments for a successful recovery.

5 WAYS YOU CAN USE FEDERAL FUNDING TO ADVANCE YOUR GIS INVESTMENT

- Aligning Solutions to the Recovery
- Meeting Diversity and Racial Equity Goals
- Building a Sustainable Future Using GIS
- Prioritizing Your Stimulus Funding
- Monitoring the Performance and Measuring the Impact of Your Efforts



ALIGNING SOLUTIONS TO THE RECOVERY

The goals of the recovery efforts are achievable through GIS solutions designed to help users understand and build back stronger communities. The pandemic heightened awareness of community needs, and GIS solutions provide the tools to address those needs.

Esri® solutions allow state and local governments to achieve the goals of the national stimulus programs. The pandemic accentuated the need for improvements in health outcomes, economic mobility, transportation, broadband access, emergency response, housing availability, and homelessness services. Applying a geographic approach brings about a greater understanding of these issues and provides models and tactics that support the goals of the recovery programs.

CASE STUDY

MODESTO USES GIS TO IMPROVE OUTREACH EFFORTS FOR PEOPLE EXPERIENCING HOMELESSNESS

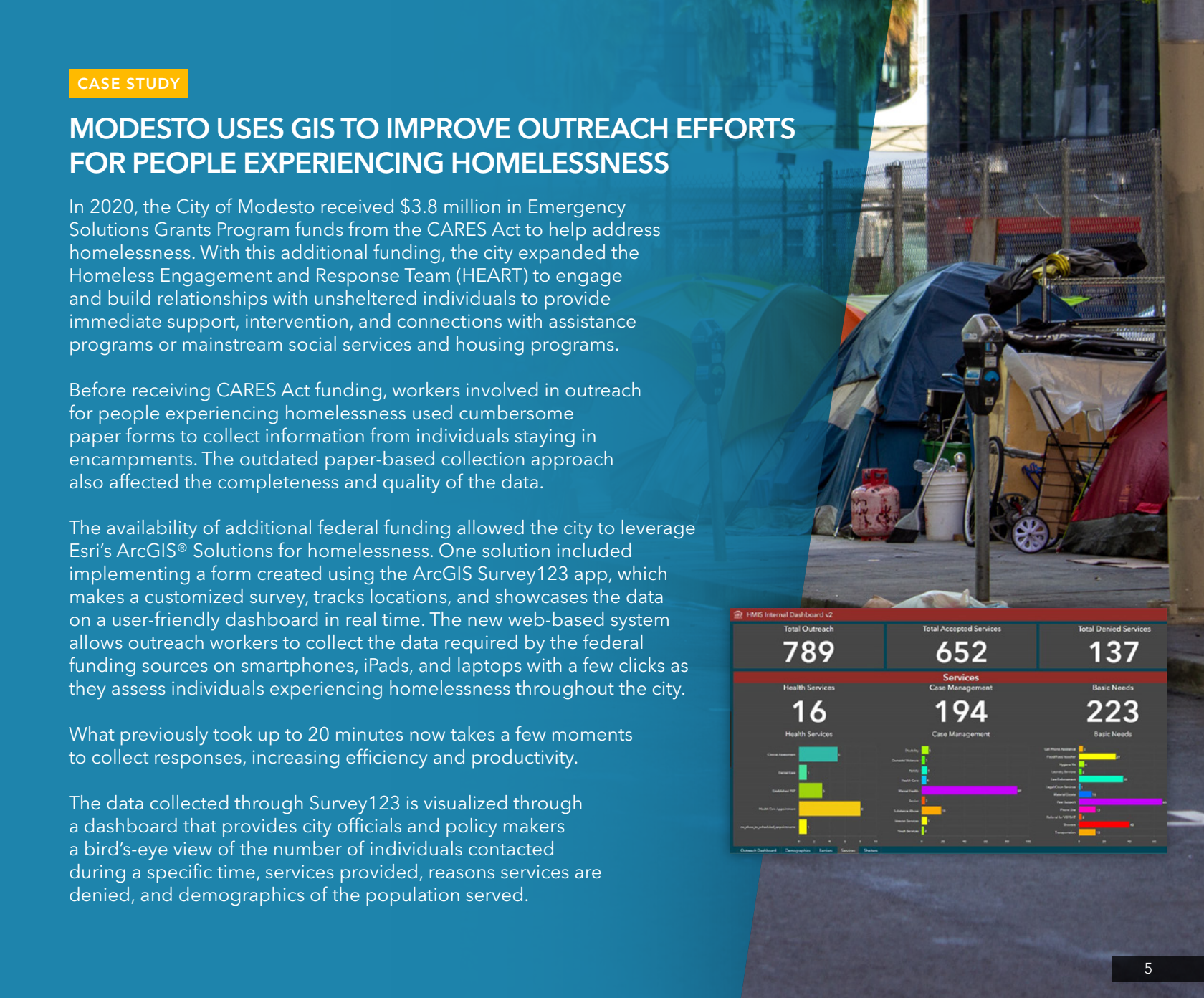
In 2020, the City of Modesto received $3.8 million in Emergency Solutions Grants Program funds from the CARES Act to help address homelessness. With this additional funding, the city expanded the Homeless Engagement and Response Team (HEART) to engage and build relationships with unsheltered individuals to provide immediate support, intervention, and connections with assistance programs or mainstream social services and housing programs.

Before receiving CARES Act funding, workers involved in outreach for people experiencing homelessness used cumbersome paper forms to collect information from individuals staying in encampments. The outdated paper-based collection approach also affected the completeness and quality of the data.

The availability of additional federal funding allowed the city to leverage Esri's ArcGIS® Solutions for homelessness. One solution included implementing a form created using the ArcGIS Survey123 app, which makes a customized survey, tracks locations, and showcases the data on a user-friendly dashboard in real time. The new web-based system allows outreach workers to collect the data required by the federal funding sources on smartphones, iPads, and laptops with a few clicks as they assess individuals experiencing homelessness throughout the city.

What previously took up to 20 minutes now takes a few moments to collect responses, increasing efficiency and productivity.

The data collected through Survey123 is visualized through a dashboard that provides city officials and policy makers a bird's-eye view of the number of individuals contacted during a specific time, services provided, reasons services are denied, and demographics of the population served.



MEETING DIVERSITY AND RACIAL EQUITY GOALS

The coronavirus highlighted just how deep the need is to address diversity and racial inequalities. Applying an equity lens to your work through the use of demographic data, analyses, and operations dashboards provides the opportunity to respond to at-risk populations and pinpoint gaps in services where people live, learn, and work.

The recovery and sustainability of our communities require stimulus spending. Opportunities to advance racial equity and social justice can be met with GIS. The coronavirus exposed just how deep the need is to address diversity and racial inequalities. By exposing inequities based on race, age, gender, and language, GIS can provide insights that ensure communities have equitable access to broadband, health care, and economic mobility, allowing the opportunity for all to succeed.

CASE STUDY

PHILADELPHIA USES CARES FUNDING TO MAP DIGITAL INEQUITIES

The coronavirus pandemic and school closures made the digital divide–the gap between those who have ready access to computers and the internet and those who don't–impossible to ignore. School districts, especially those with large populations of students from economically disadvantaged families, had to devise ways to keep students from being left behind.

Because Philadelphia is one of America's most economically disadvantaged large cities and has all its schools consolidated into a single school district, it had to quickly determine who was most at risk. Fortunately, a joint effort launched by the Office of Innovation and Technology (OIT) and the Mayor's Office of Education and backed by CARES funding helped families obtain computers and establish home Wi-Fi hot spots while also making plans to establish community computing access centers. The initial difficulty was in how to identify families that needed the program the most; those experiencing housing insecurity were hard to contact.

To help organize efforts, CityGeo, a dedicated team within OIT devoted to mapping and spatial analysis, was brought in. CityGeo was already using GIS to maintain a city stress index that compiles geographic data on crime, homelessness, drug abuse, and other issues that would suggest the existence of students in need. The data helped PHLConnectED, the city's program to help families get connected to the internet, prioritize the distribution of wireless routers to create mobile hot spots for students.

BUILDING A SUSTAINABLE FUTURE USING GIS

Fighting the climate crisis requires funding and support. It also requires an understanding of how the impacts from climate change on the environment, agriculture, and the economy will affect communities. The transparent and scientific approach of GIS helps governments take necessary, proactive steps.

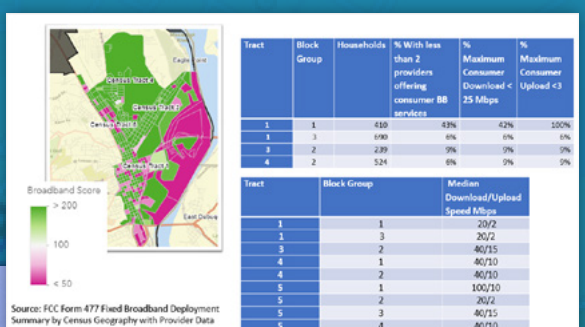
Government leaders who need to understand the impacts of climate change rely on climate risk analytics and GIS technology. They are building actionable climate change solutions using location intelligence and GIS based on detailed risk analysis and response. These solutions help them visualize and analyze the long-term effects of global warming-related impacts and disasters such as floods, wildfires, storm surges, and droughts. Finding hidden vulnerabilities and patterns in data is the first step in climate change planning.

Accurate visualizations and robust analysis help in many scenarios, such as encouraging city officials to increase access to clean transportation, assisting emergency management in creating comprehensive disaster response plans, and arming lawmakers with data to prioritize renewable energy and green infrastructure projects. Easily accessible tools and storytelling help officials implement a climate action plan and inspire action from a broad audience.

Communicating plans through a universal language, such as location, helps people understand climate challenges and solutions to make and track their progress. These plans can inspire others to be engaged and help them clearly understand how their actions will impact their communities, livelihood, homes, and families.

PRIORITIZING STIMULUS FUNDING

Stimulus funding programs provide the opportunity to stimulate the economy and establish sustainable infrastructure. A geographic approach to prioritizing projects and spending informs decisions and presents insight into which efforts will have the greatest impacts on communities. Programs ranging from affordable housing to broadband access can be prioritized neighborhood by neighborhood using historical data, public input, and long-range forecasting in a mapcentric dashboard to meet an organization's goals.



Tract	Block Group	Households	% With less than 2 providers offering consumer BB services	% Maximum Consumer Download < 25 Mbps	% Maximum Consumer Upload <3
1	1	610	43%	42%	100%
1	3	690	6%	6%	6%
3	2	239	9%	9%	9%
4	2	524	8%	9%	9%

Tract	Block Group	Median Download/Upload Speed Mbps
1	1	20/2
1	3	20/2
3	2	40/15
4	1	40/10
4	2	40/10
5	1	100/10
5	2	20/2
5	3	40/15
5	4	40/10

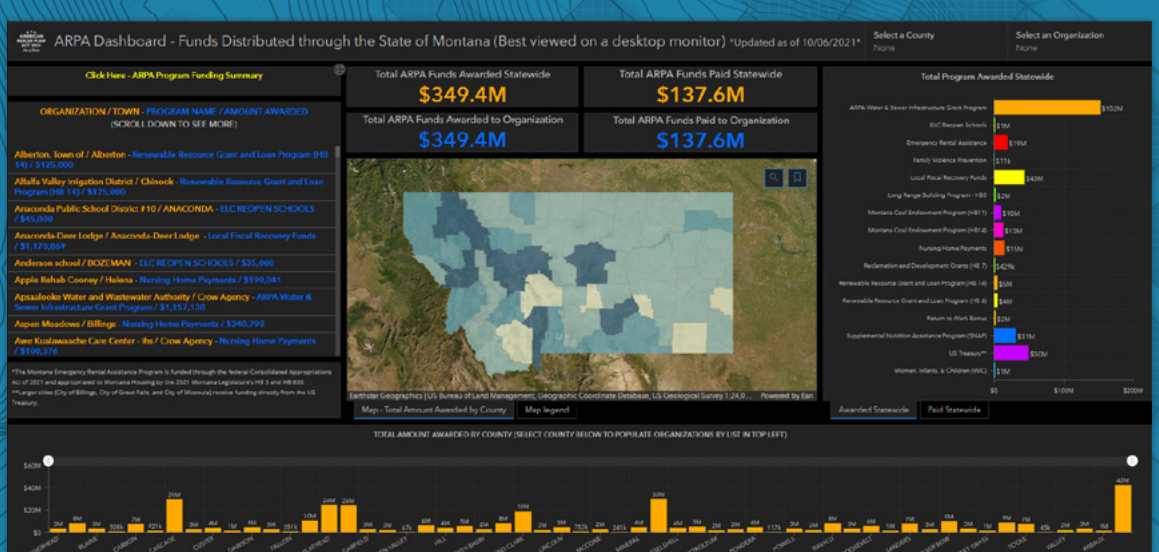
Dubuque, Iowa, used GIS to prioritize stimulus funding to improve broadband infrastructure.

MONITORING THE PERFORMANCE AND MEASURING THE IMPACT OF YOUR EFFORTS

ArcGIS can also be used to effectively track all stimulus-funded efforts and to ensure that funds are being distributed equitably. Maps and dashboards track and analyze the performance of programs, enabling governments to present the data in an easy-to-understand format and ensuring transparency with their constituents. Government leaders leverage these decision-making tools to identify trends, inequities, or areas of concern and then adapt strategies and operations accordingly.

Real-time performance monitoring enables communities to tap into the power of real-time dashboards and metrics to track resources, validate whether their efforts are working, determine who is impacted, and assist officials in making timely decisions. Data is a powerful tool for helping smart communities better understand how they're performing today, what's possible in the future, and how to strategically bridge the gap in between.

High-performing organizations are using location as the standard analytical approach to achieving new insights. By geoenabling data and enterprise systems, governments can enhance business intelligence, establish more efficient workflows, and improve communication and transparency.



Montana officials used mapping tools and dashboards to track and share infrastructure spending.

CASE STUDY

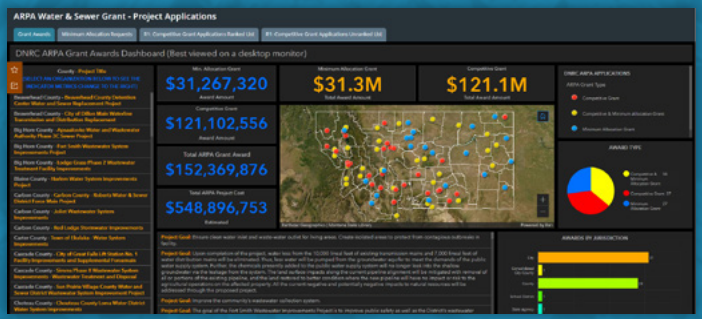
MONTANA USES GIS TO ENSURE TRANSPARENCY TO ARPA FUNDING DISTRIBUTION

The American Rescue Plan Act of 2021 (ARPA) is a wide-ranging economic relief program. Montana's online ARPA tools provide a model of transparency that any state can follow to help residents understand the funding mechanisms and to promote internal accountability within state agencies. Key to Montana's approach is a unique combination of technologies that are all supported by a GIS.

Maps built by the Department of Natural Resources and Conservation (DNRC) help the public in Montana see where the state is distributing its federal economic stimulus funds. ArcGIS Dashboards provides critical additional context, but Montana's DNRC also needs to communicate material clearly and effectively. For that reason, the dashboards and maps are packaged within an **informational website** built by Lauri Abeyta, a DNRC web developer, using Esri's ArcGIS Hub software as a service (SaaS) offering.

"It was fast and easy to spin up," Abeyta said. "With just our current website, I don't think we would've gotten the traffic or been able to disseminate information in a way that made sense to the public, with the easy interlaying of different dashboards and other good stuff."

The wealth of information provided by the hub functioned as an informational clearinghouse, reducing the number of process-related queries from potential grant applicants that had to be fielded by DNRC staff. "Front-loading information resources for potential applicants reduced some of the impact," said Brian Collins, DNRC's GIS manager. "We knew if we gave applicants a fighting chance at understanding the process, that alone would be a huge success."



Montana's Department of Natural Resources and Conservation employed maps and dashboards, packaged with ArcGIS Hub, to add transparency to the distribution of economic stimulus funds.

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