



**DEPARTMENT OF BUSINESS,
ECONOMIC DEVELOPMENT & TOURISM**
KA 'OIHANA HO'OMOHALA PĀ'OIHANA, 'IMI WAIWAI
A HO'OMĀKA'IKA'I

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December 18, 2023

The Honorable Ronald D. Kouchi,
President and Members
of the Senate
Thirty-Second State Legislature
State Capitol, Room 409
Honolulu, Hawaii 96813

The Honorable Scott K. Saiki,
Speaker and Members of the
House of Representatives
Thirty-Second State Legislature
State Capitol, Room 431
Honolulu, Hawaii 96813

Dear President Kouchi, Speaker Saiki, and Members of the Legislature:

For your information and consideration, I am transmitting a copy of the Department of Business, Economic Development, and Tourism's Report on SCR41 HD1, SD1 (2022). In accordance with Section 93-16, Hawaii Revised Statutes, I am also informing you that the report may be viewed electronically at:

<http://dbedt.hawaii.gov/overview/annual-reports-reports-to-the-legislature/>.

Sincerely,

James Kunane Tokioka

Enclosure

c: Legislative Reference Bureau

Report to the 2024 Hawai'i State Legislature:

Pursuant to SCR41 HD1, SD1 (2022)

REQUESTING THE HAWAI'I BROADBAND AND DIGITAL EQUITY OFFICE TO CONDUCT A
DATA MAPPING STUDY TO IDENTIFY GEOGRAPHICALLY UNDERSERVED AND
UNSERVED AREAS IN THE STATE THAT LACK QUALITY BROADBAND CONNECTIVITY.

Prepared by:

Hawai'i Broadband and Digital Equity Office
Department of Business, Economic Development, and Tourism
and
University of Hawai'i

December 2023

Background

In August 2021, Governor David Ige designated the University of Hawai'i System to lead and coordinate a broad-scale strategic investment effort to ensure all Hawai'i's citizens have access to robust and reliable broadband services. The University is collaborating with the Hawai'i Broadband and Digital Equity Office and other funding recipients in the State (e.g., Hawaiian Telcom) to ensure that the more than \$400 million allocated to Hawai'i is maximized.

In 2023, under the leadership of Governor Josh Green and Lt. Governor Sylvia Luke and building on the initiatives started under Governor David Ige, the University of Hawai'i (UH) has been tasked with coordinating all of Hawai'i's broadband projects and developing a plan for how the federal funds will be spent. UH is partnering with the four Hawai'i counties, various state agencies, community organizations, the telecom industry, and others to understand each community's greatest needs as we all work toward a common goal of ensuring all residents are equipped to fully participate and thrive in a digitally connected world.

Among these federal programs is the Broadband Equity, Access, and Deployment (BEAD) Program, a \$149.5 million award to Hawai'i, part of the Infrastructure Investment and Jobs Act (2021), which prioritizes building high-speed internet access to unconnected (i.e., unserved) residential locations, and to communities with underperforming Internet connections (i.e., underserved).

Definitions

Unserved Locations: An unserved location is defined as a broadband-serviceable location that the Broadband DATA Maps show as (a) having no access to broadband service, or (b) lacking access to Reliable Broadband Service offered with - (i) a speed of not less than 25 Mbps for downloads; and (ii) a speed of not less than 3 Mbps for uploads; and (iii) latency less than or equal to 100 milliseconds (BEAD Notice of Funding Opportunity (NOFO) Section I.C.dd).

Underserved Locations: An underserved location is defined as a broadband-serviceable location that is (a) not an unserved location, and (b) that the Broadband DATA Maps show as lacking access to Reliable Broadband Service offered with - (i) a speed of not less than 100 Mbps for downloads; and (ii) a speed of not less than 20 Mbps for uploads; and (iii) latency less than or equal to 100 milliseconds (BEAD Notice of Funding Opportunity (NOFO) Section I.C.bb).

Methodology

In 2018, the National Telecommunication and Information Administration (NTIA) received funding from Congress to update the National Broadband Availability Map (NBAM¹) in coordination with the Federal Communications Commission (FCC). Congress directed NTIA to acquire and utilize data from available third-party datasets. NTIA built upon existing partnerships with states and local governments to identify data from state, local, and tribal governments, owners and operators of broadband networks, educational institutions, nonprofits, and cooperatives to create the map. The map is updated twice a year, with the latest version being June 2023 data updated on November 17, 2023.

The following are key components of the methodology to determine unserved and underserved locations:

¹ <https://broadbandmap.fcc.gov/home>

1. **Data Collection from Internet Providers:** The NBAM relies on data provided by broadband service providers (also known as Internet service providers (ISPs)). These providers are required to submit information on the areas they serve, the types of services offered, and the speeds at which they provide those services.
2. **Mapping Broadband Service Locations:** The collected data is then used to map broadband serviceable locations. This involves identifying where broadband services are available, the specific technologies used (e.g., DSL, cable, fiber-optic), and the speeds of those technologies.
3. **Public Input and Validation:** The NBAM may also incorporate public input and feedback to validate the accuracy of the data. This can involve input from individuals, communities, and local authorities to ensure that the maps reflect the on-the-ground reality of broadband access.
4. **Defining Unserved and Underserved Areas:** Once the broadband service areas are mapped, specific criteria are used to define unserved and underserved areas. Unserved areas typically refer to locations where there is no wired broadband service available, or the available service does not meet certain speed thresholds. Underserved areas are those where the existing broadband service is below specified quality and speed standards.
5. **Identifying Unserved and Underserved Areas:** The set of broadband serviceable locations was filtered, using the definitions above to categorize broadband serviceable locations as unserved or underserved.

According to the Hawai'i BEAD Five-Year Action Plan², Hawai'i has 12,740 unserved and underserved locations across the State, with the breakdown of each category by island in the table below. These numbers are based on the NBAM December 2022 data set and are currently being reassessed for the newly released June 2023 data set.

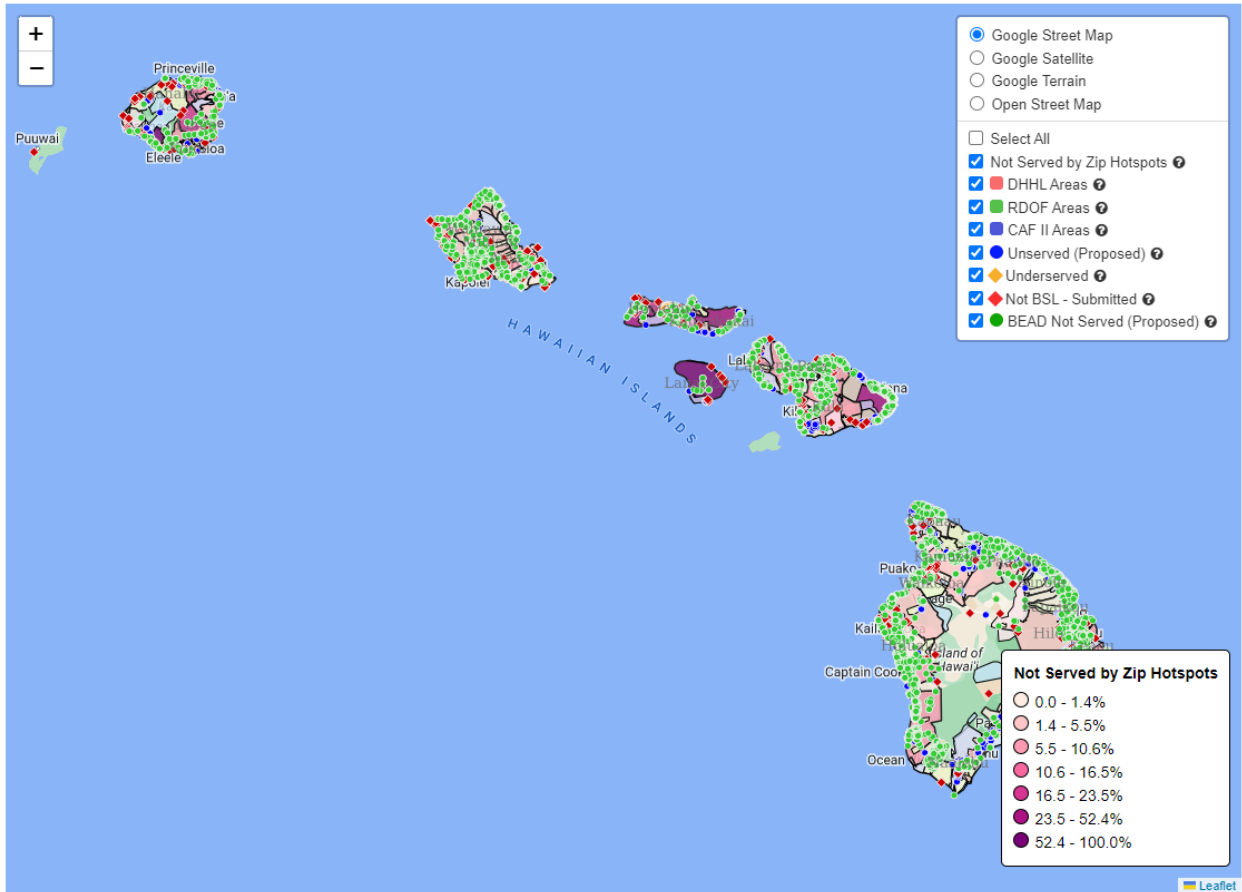
Island	Unserved	Underserved
Hawai'i	9,054	335
Kaua'i	383	12
Lāna'i	41	0
Maui	1,039	561
Moloka'i	400	28
O'ahu	752	135
TOTAL	11,669	1,071

University of Hawai'i - State Broadband Service Map

The following map was developed by the University of Hawai'i and shows **unserved** (locations with NO wired infrastructure to access the Internet) and **underserved** (locations with wired Internet infrastructure that DO NOT support the minimum speeds of the 100Mbps download / 20Mbps upload) locations in Hawai'i as provided by the National Telecommunications and Information Administration (NTIA). This data uses the NBAM December 2022 version.

² <https://www.hawaii.edu/broadband/five-year-action-plan/>

The State Broadband Service Map can be found at: <https://www.hawaii.edu/broadband/state-broadband-service-map/>



Future Work & Recommendations

The University of Hawai'i will be hosting the State's BEAD Challenge Process to further refine the set of unserved and underserved locations in Hawai'i and identify applicable funding sources to deploy broadband to each location. This Challenge Process will involve non-profit organizations, internet service providers, and local government and is tentatively scheduled to begin in Spring 2024.

It is recommended the legislature advertise to their constituents Connect Kākou³, the statewide broadband initiative led by the Lieutenant Governor, especially to areas that are considered unserved and underserved, to keep them informed of broadband developments like BEAD and digital equity efforts in their communities.

Closing

The community of broadband and digital equity stakeholders – Office of the Lieutenant Governor, University of Hawai'i, Hawai'i Broadband and Digital Equity Office, Department of Hawaiian Homelands, and representatives from Kaua'i, Honolulu, Maui, and Hawai'i County departments – are committed to working together to provide recommendations to close the digital divide and achieved our digital equity goals in Hawai'i.

Thank you for the opportunity to provide this update.

³ <https://www.connectkakou.org/>