

Island Broadband Survey Results

September 2021



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Island Broadband Planning Committee

The City of Portland's Island Broadband Planning Committee was established in 2021 to:

- Learn about existing broadband services on Cliff Island, Cushing Island, Great Diamond Island, Little Diamond Island, and Peaks Island,
- Research opportunities and strategies to enhance broadband services, and
- Start to develop community feedback and consensus about priorities and needs.

The Committee includes representatives from each island community, as well as staff from the City's Public Works, Housing & Economic Development, and Executive departments.





Island Internet Survey

In July 2021, the Committee distributed a survey to all island residents (residential properties) to collect information about broadband services, reliability, usage, and desire for improvement.

This survey was distributed to approximately 1,300 residential property owners. All received a paper copy. Committee members also shared the digital survey with local distribution lists, and the City promoted the digital survey on Nextdoor.

As of August 4, 2021, 463 responses had been received, representing a nearly 36% return rate.



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Island Internet Survey

The purpose of this survey is to better understand internet needs and services on Cliff Island, Cushing Island, Great Diamond Island, Little Diamond Island, and Peaks Island.

It is brought to you by the City of Portland's Broadband Planning Committee, established to determine gaps in service and explore possible solutions. The Committee meets on the last Monday of each month, and the public is welcome to join.

For more information, visit portlandmaine.gov/broadband or email citymanager@portlandmaine.gov

* Required

General Takeaways

Review of the following results yielded some important initial takeaways and insights by the Broadband Planning Committee and are worth noting here.

First: when it comes to performance (upload and download speeds), Cliff Island and Peaks Island are outliers as a result of Cliff Island's privately developed fiber network and Spectrum's presence on Peaks Island.

Second: there is a strong correlation between performance and the type of technology (i.e. service provider) deployed on each island. Respondents with ISPs that use fiber to the premises networks indicated better download and upload speeds, while those relying fixed wireless internet reported much slower speeds. Cushing, however, seems to buck this trend, reporting a general reliance on fixed wireless and strong upload and download speeds. While not confirmed, this could be the result of respondents measuring internet speed from a computer in their primary home, instead of their island vacation home.



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* Required

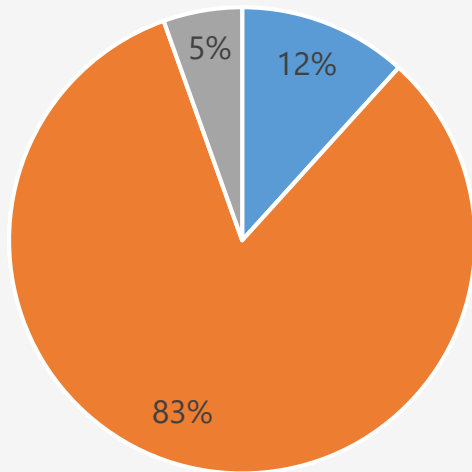
Results: Island by Island



Island by Island: Cliff Island*

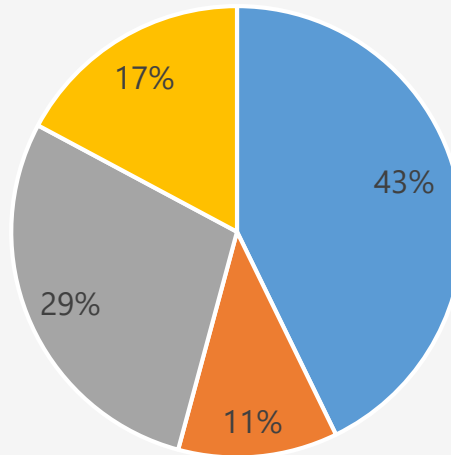
Property Type

■ Rental ■ Primary ■ Seasonal



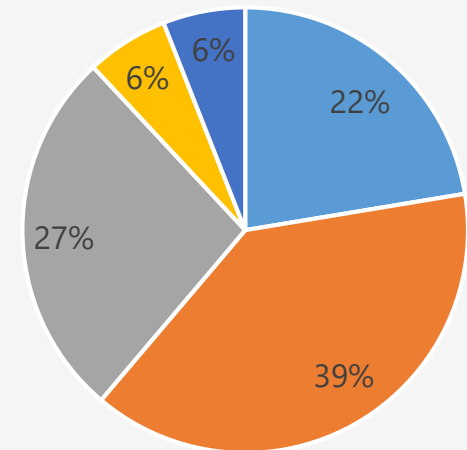
ISP

■ Axiom ■ Consolidated ■ Other ■ None



Usage

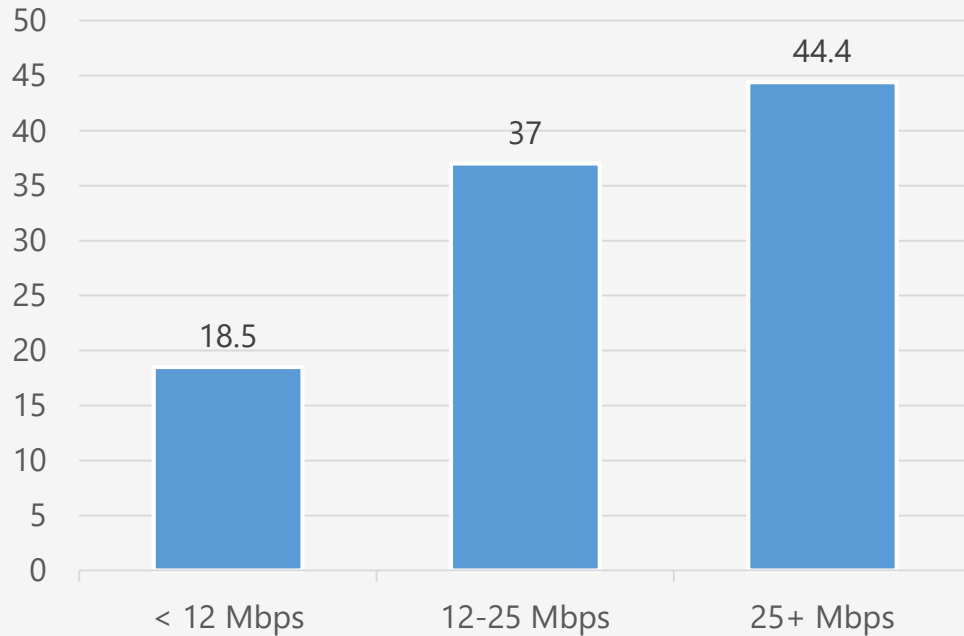
■ Doctor ■ Leisure ■ Remote Work
■ Remote School ■ Homework



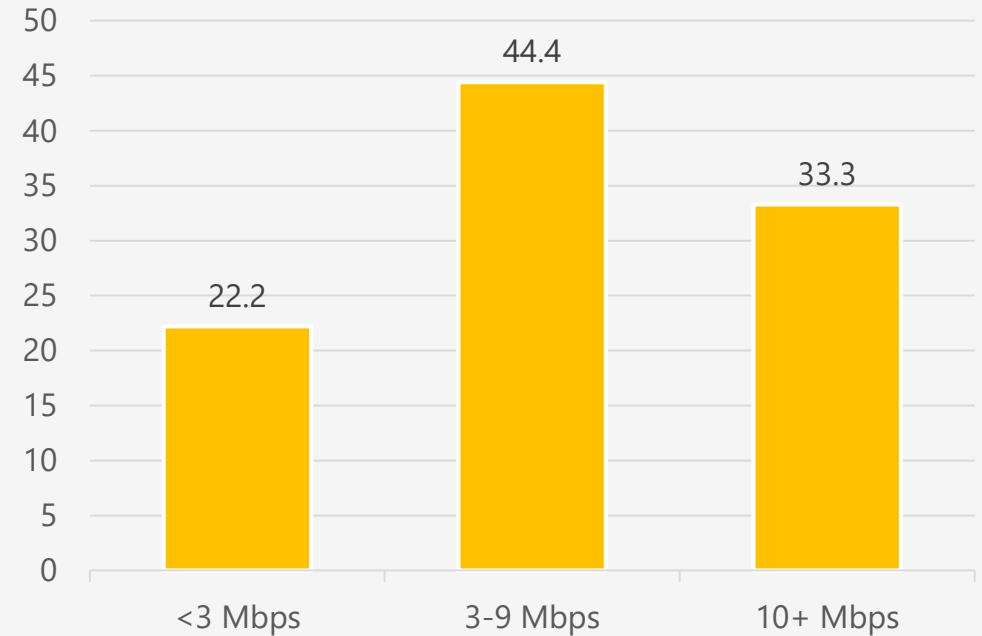
*33 Cliff Island residents responded to the survey, representing 7% of total respondents.

Island by Island: Cliff Island (continued)

Download Speed



Upload Speed

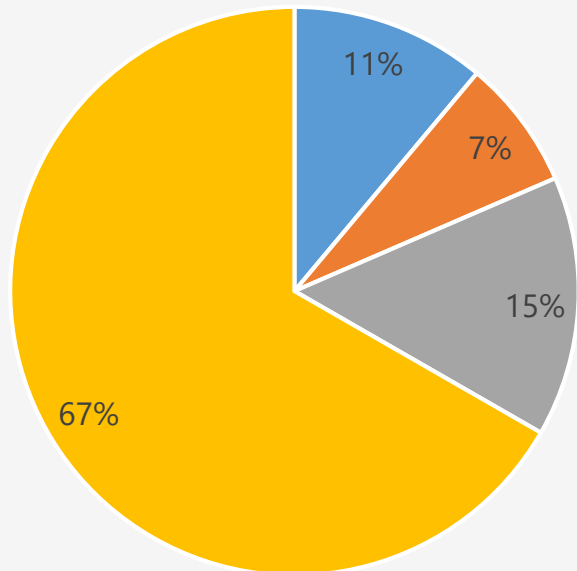


The broadband standard varies by organization. For example, ConnectME designates areas unserved by broadband as those that have internet speeds below 50 Mbps for download and 10 Mbps for upload. The FCC defines the minimum standard for broadband as 25 Mbps download and 3 Mbps upload.

Island by Island: Cliff Island (continued)

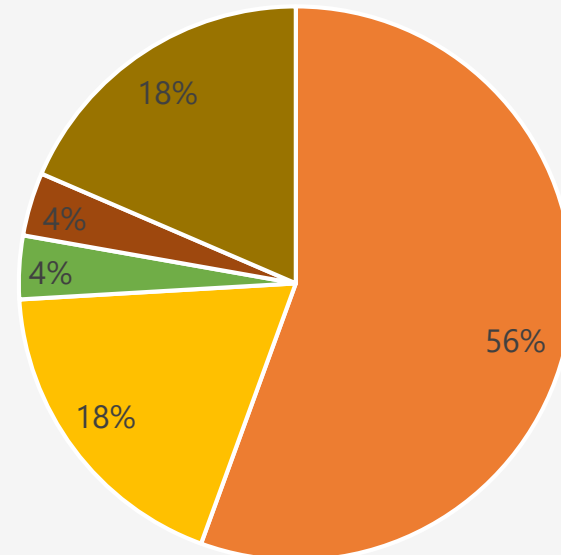
Cost of Internet Service

■ Under \$40 ■ \$50 - \$60 ■ \$60 - \$70 ■ Over \$70



How Much More are Residents Willing to Spend?

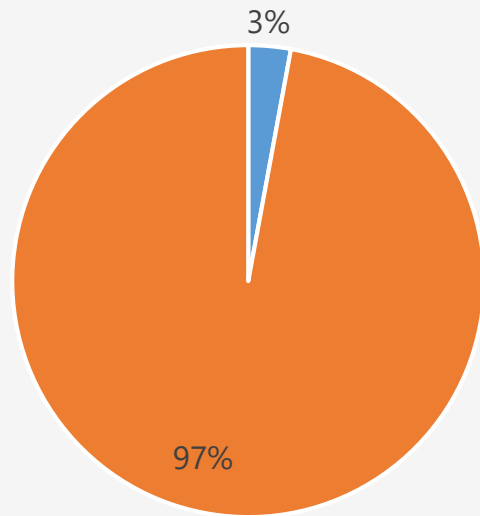
■ \$0 ■ < \$10 ■ \$10 - \$20 ■ \$20 - \$30 ■ > \$30



Island by Island: Cushing Island*

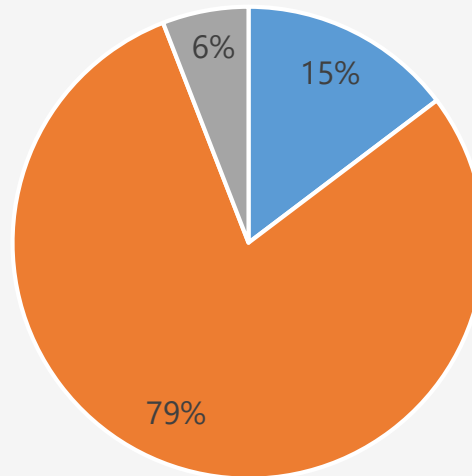
Property Type

Rental Seasonal



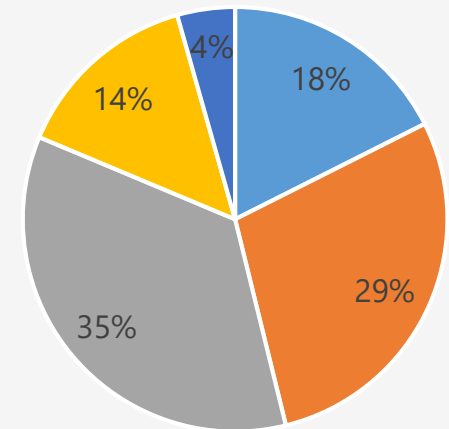
ISP

Redzone Consolidated None



Usage

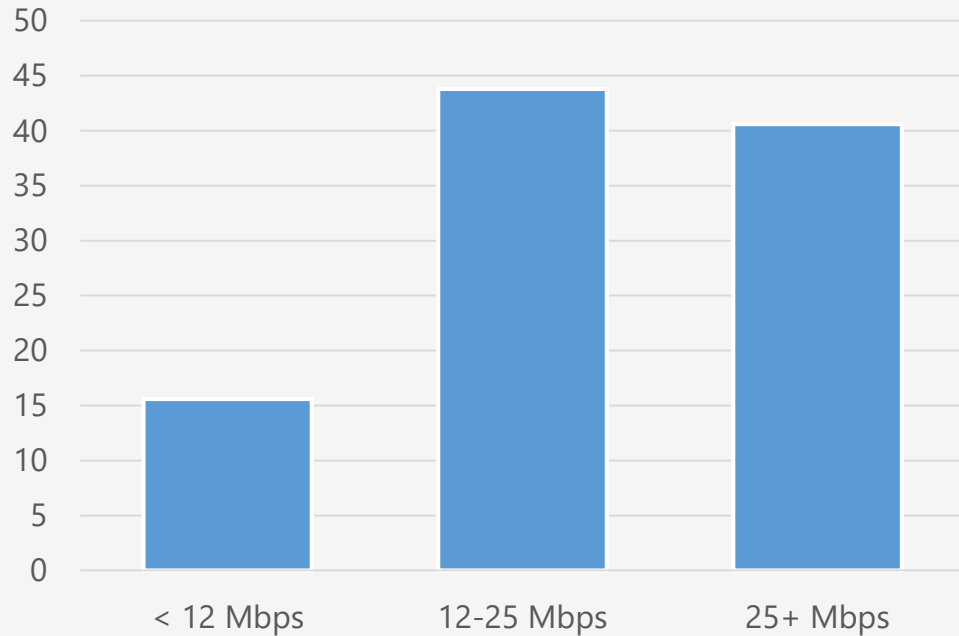
Doctor Leisure Remote Work
Remote School Homework



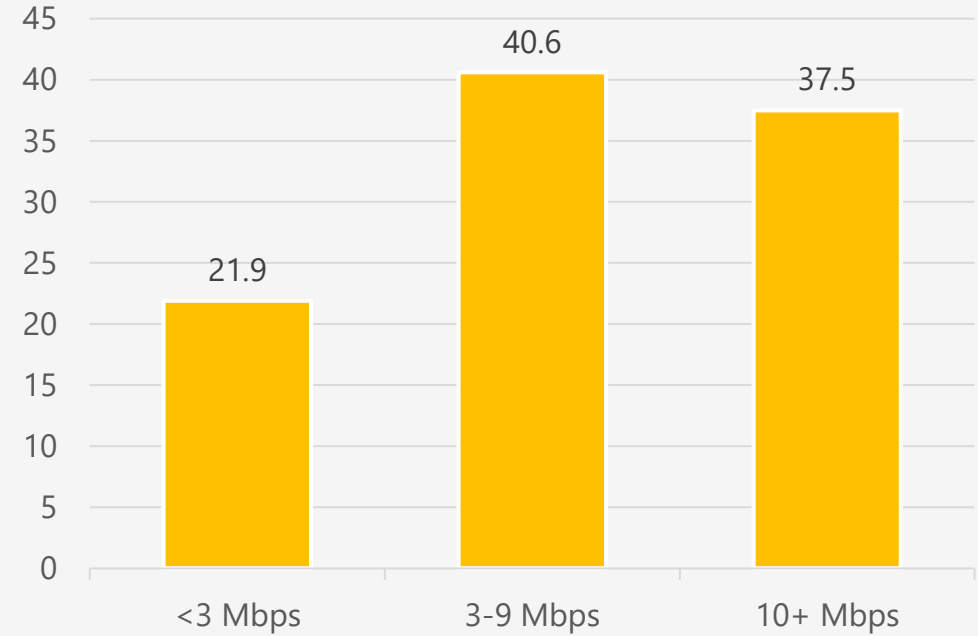
*34 Cushing Island residents responded to the survey, representing 8% of total respondents.

Island by Island: Cushing Island (continued)

Download Speed



Upload Speed

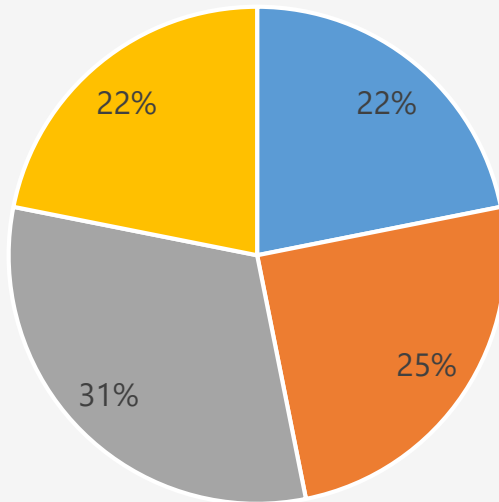


The broadband standard varies by organization. For example, ConnectME designates areas unserved by broadband as those that have internet speeds below 50 Mbps for download and 10 Mbps for upload. The FCC defines the minimum standard for broadband as 25 Mbps download and 3 Mbps upload.

Island by Island: Cushing Island (continued)

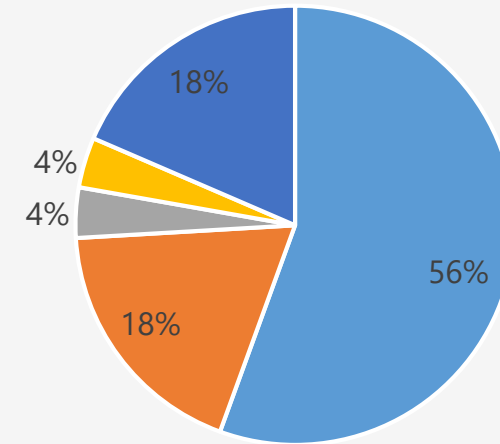
Cost of Internet Service

■ \$40 - \$50 ■ \$50 - \$60 ■ \$60 - \$70 ■ Over \$70



How Much More are Residents Willing to Spend?

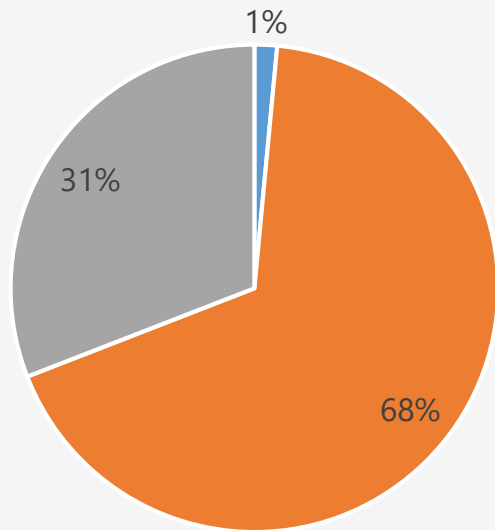
■ \$0 ■ < \$10 ■ \$10 - \$20 ■ \$20 - \$30 ■ > \$30



Island by Island: Great Diamond Island*

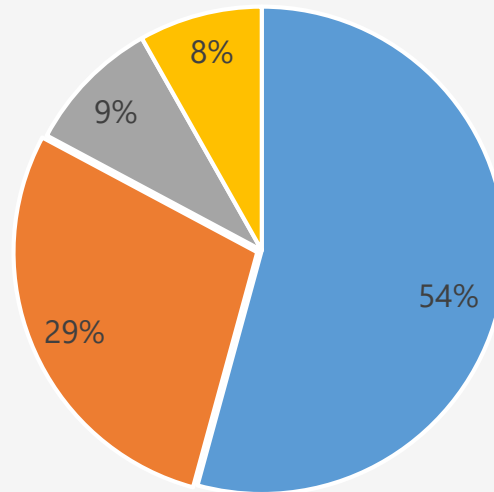
Property Type

■ Rental ■ Seasonal ■ Primary



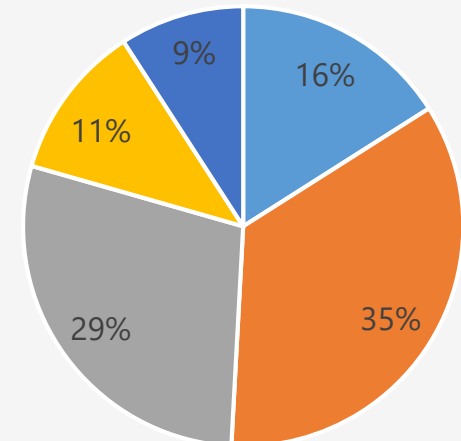
ISP

■ Redzone ■ Consolidated ■ None ■ Other



Usage

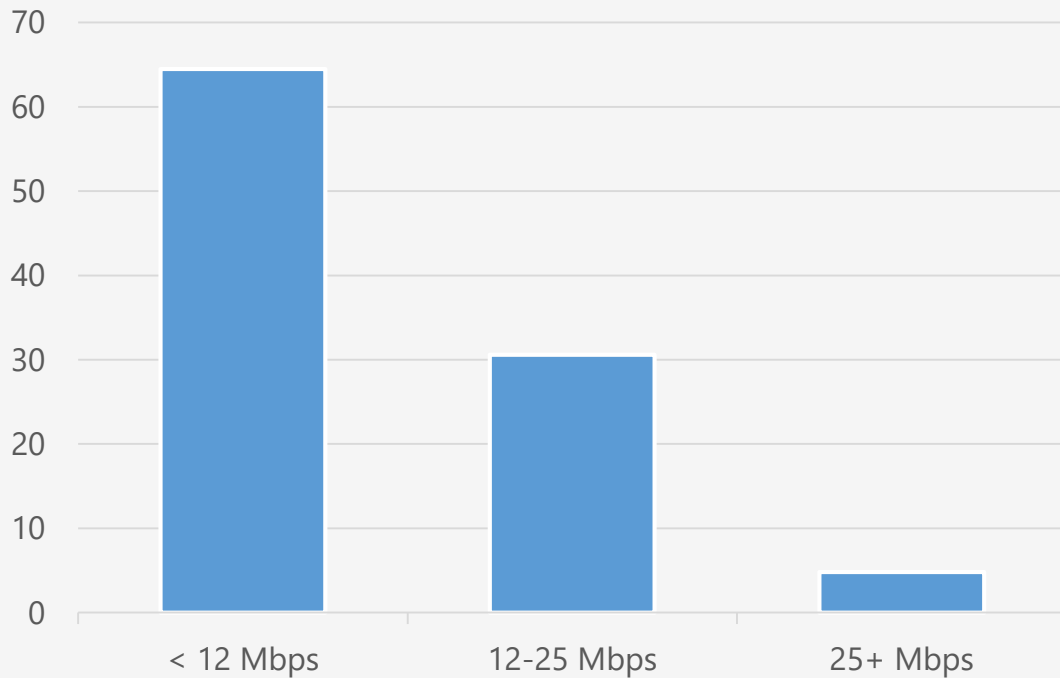
■ Doctor ■ Leisure ■ Remote Work
 ■ Remote School ■ Homework



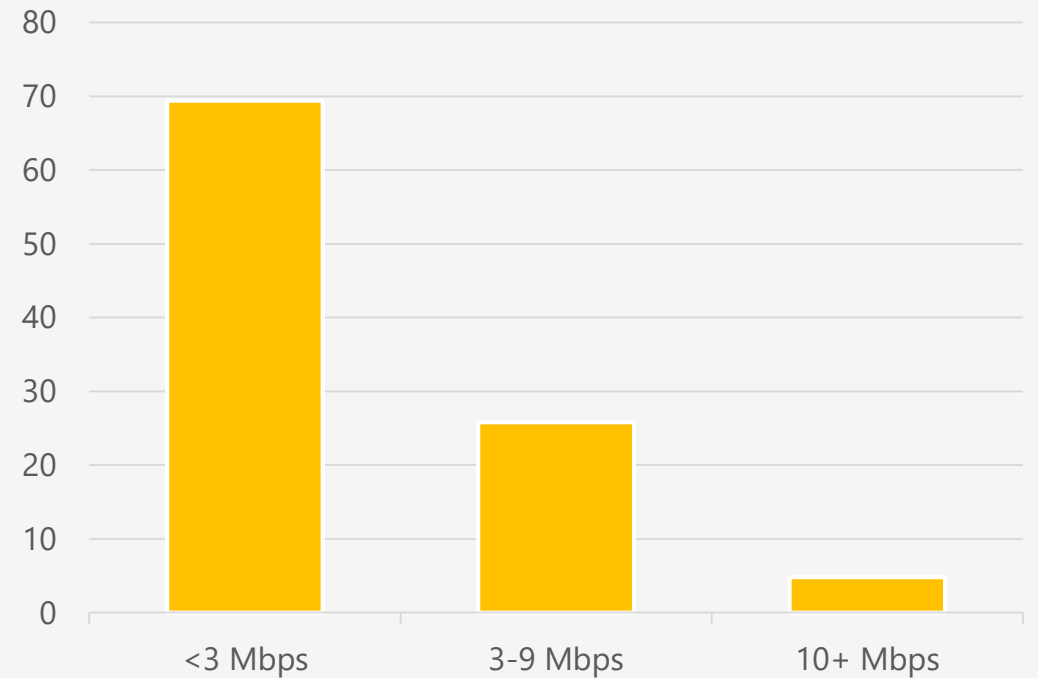
*71 Great Diamond Island residents responded to the survey, representing 15% of total respondents. Approximately 40% of respondents own property on the public side of GDI; 60% own property on the private side.

Island by Island: Great Diamond Island (continued)

Download Speed

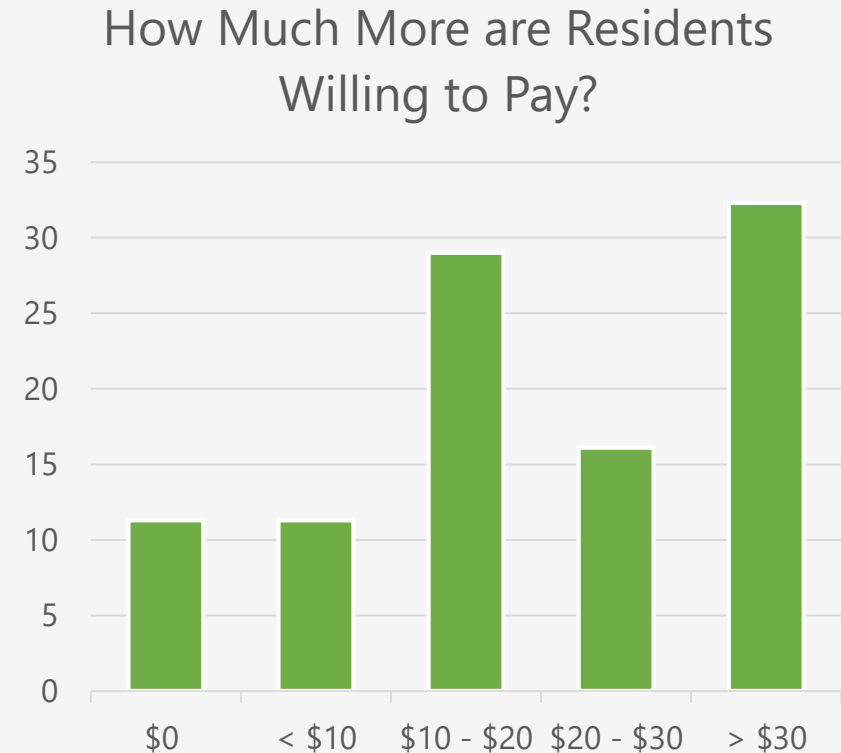
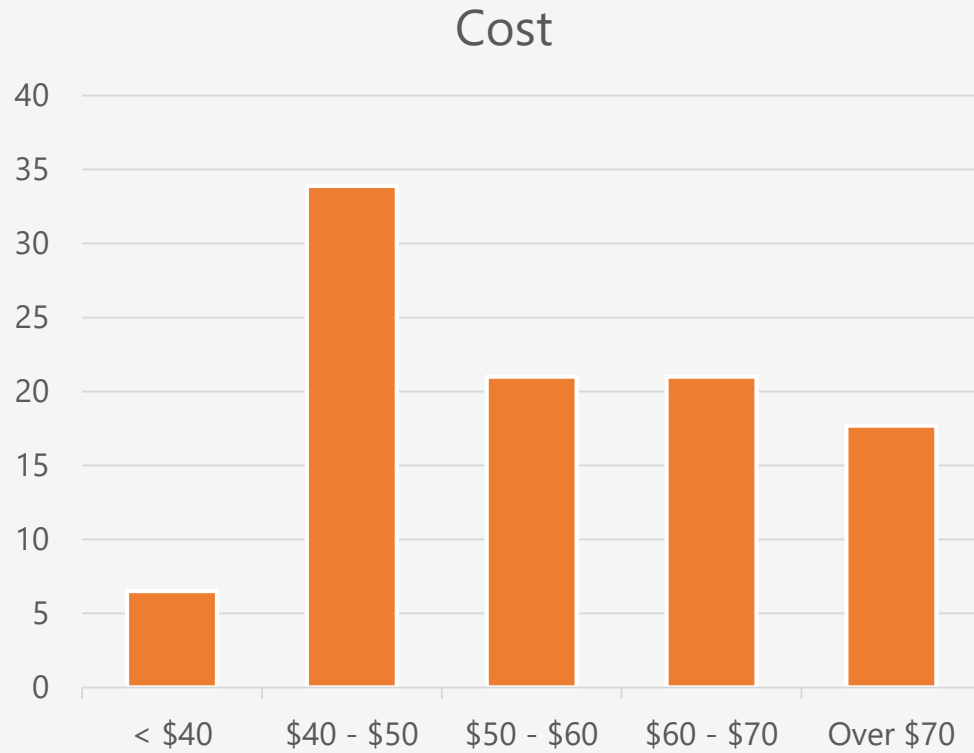


Upload Speed



The broadband standard varies by organization. For example, ConnectME designates areas unserved by broadband as those that have internet speeds below 50 Mbps for download and 10 Mbps for upload. The FCC defines the minimum standard for broadband as 25 Mbps download and 3 Mbps upload.

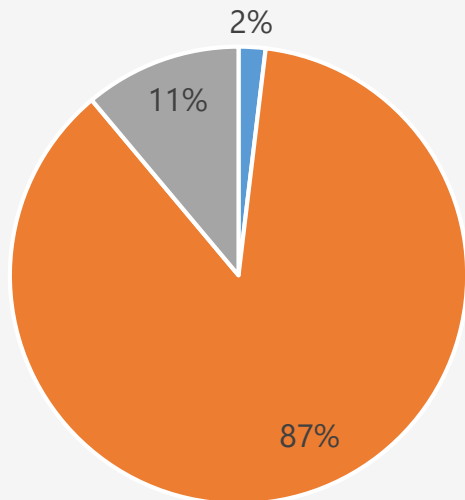
Island by Island: Great Diamond Island (continued)



Island by Island: Little Diamond Island*

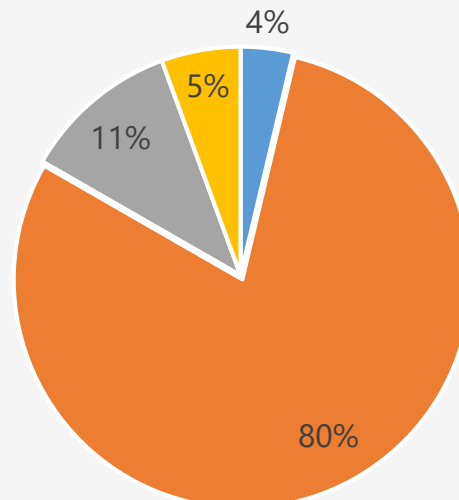
Property Type

■ Rental ■ Seasonal ■ Primary



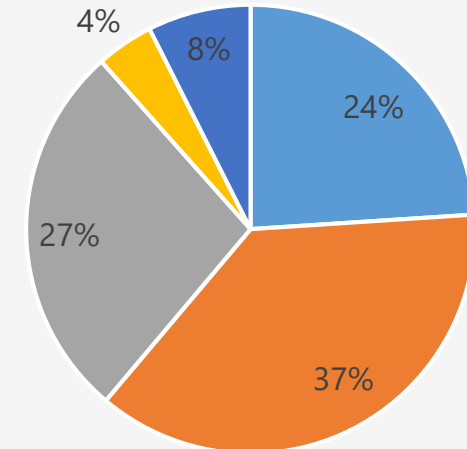
ISP

■ Spectrum ■ Consolidated ■ None ■ Other



Usage

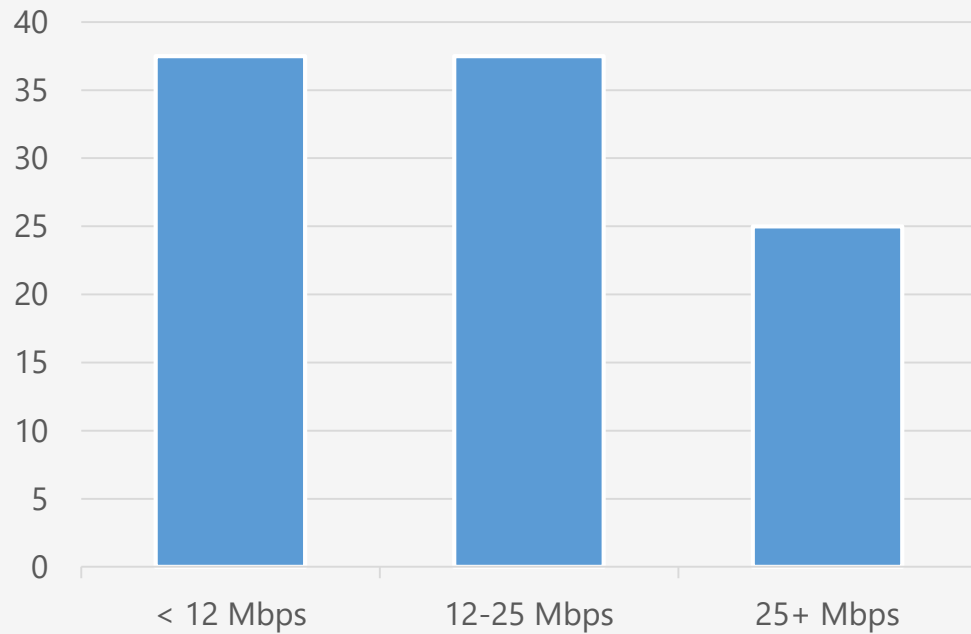
■ Doctor ■ Leisure ■ Remote Work
■ Remote School ■ Homework



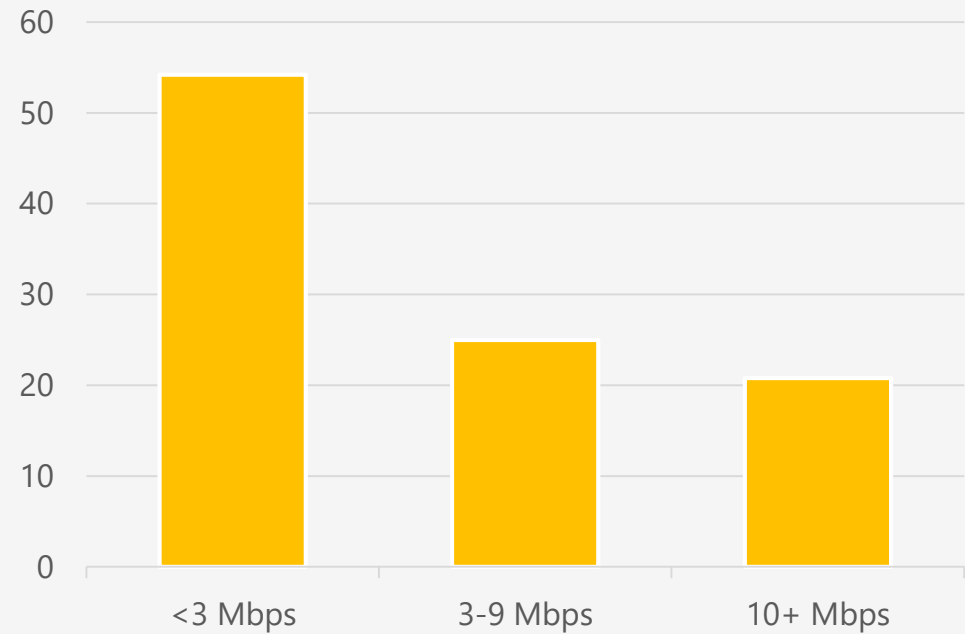
*56 Little Diamond Island residents responded to the survey, representing 12% of total respondents.

Island by Island: Little Diamond Island (continued)

Download Speed



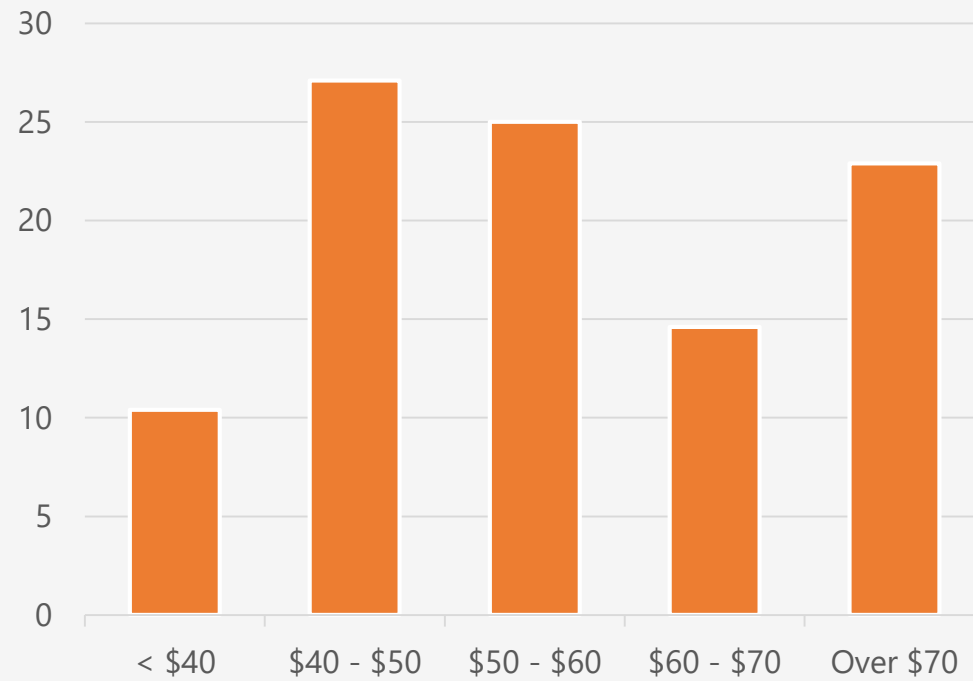
Upload Speed



The broadband standard varies by organization. For example, ConnectME designates areas unserved by broadband as those that have internet speeds below 50 Mbps for download and 10 Mbps for upload. The FCC defines the minimum standard for broadband as 25 Mbps download and 3 Mbps upload.

Island by Island: Little Diamond Island (continued)

Cost of Internet Service



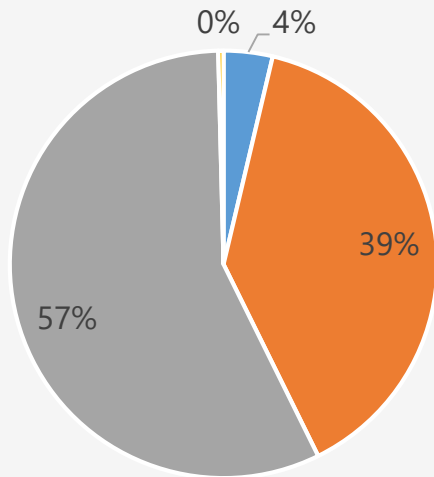
How Much More are Residents Willing to Pay



Island by Island: Peaks Island

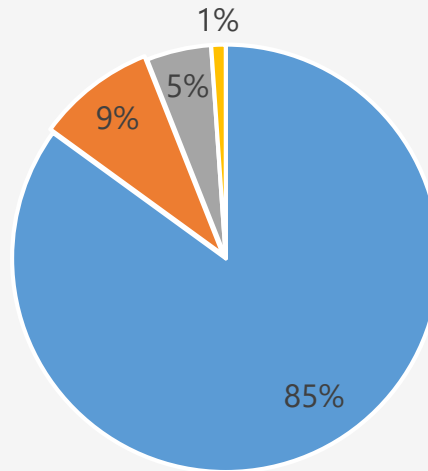
Property Type

■ Rental ■ Seasonal ■ Primary ■ Commercial



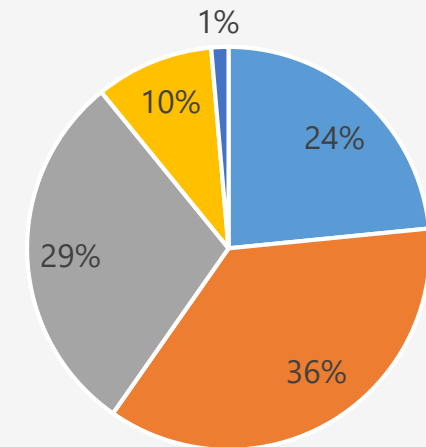
ISP

■ Spectrum ■ Consolidated ■ None ■ Other



Usage

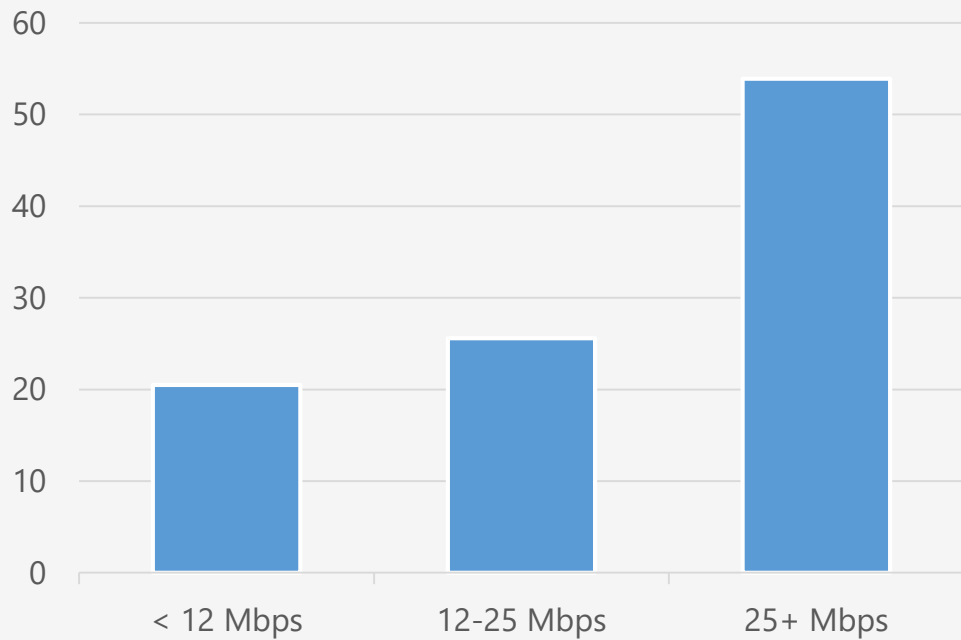
■ Doctor ■ Leisure ■ Remote Work
 ■ Remote School ■ Homework



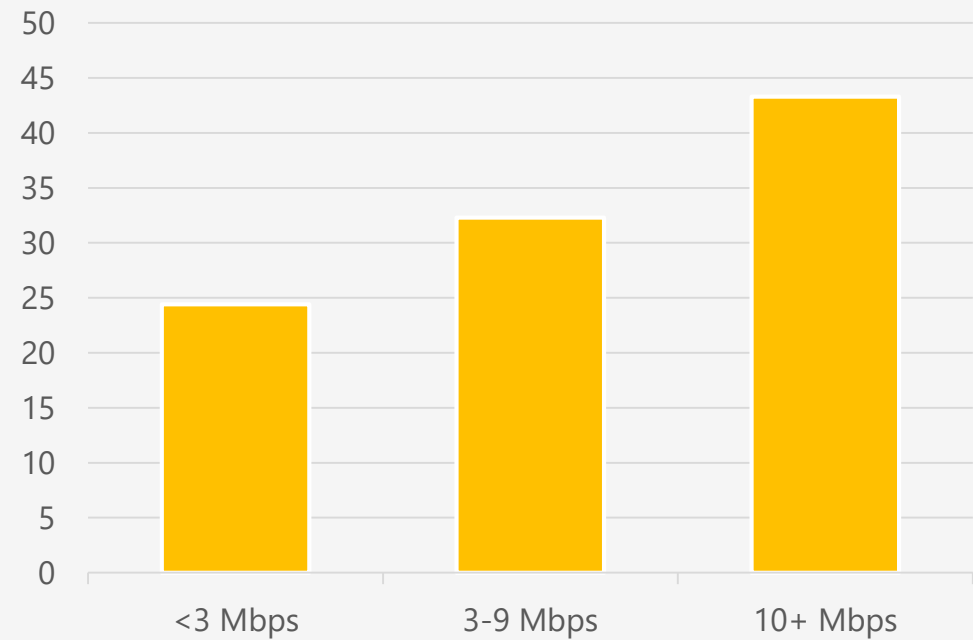
*274 Peaks Island residents responded to the survey, representing 58% of total respondents.

Island by Island: Peaks Island (continued)

Download Speed



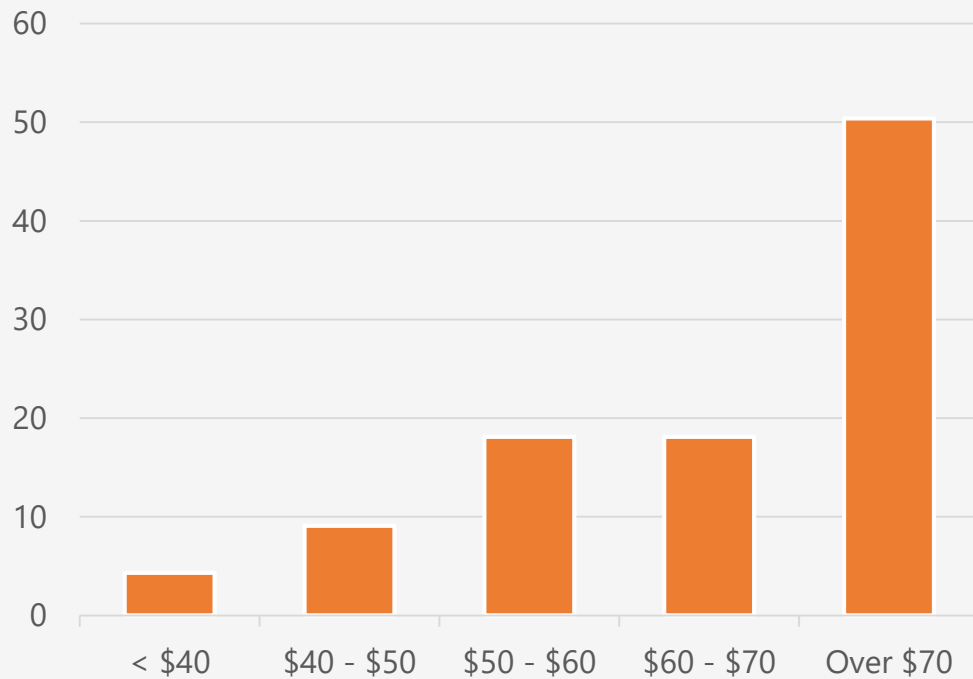
Upload Speed



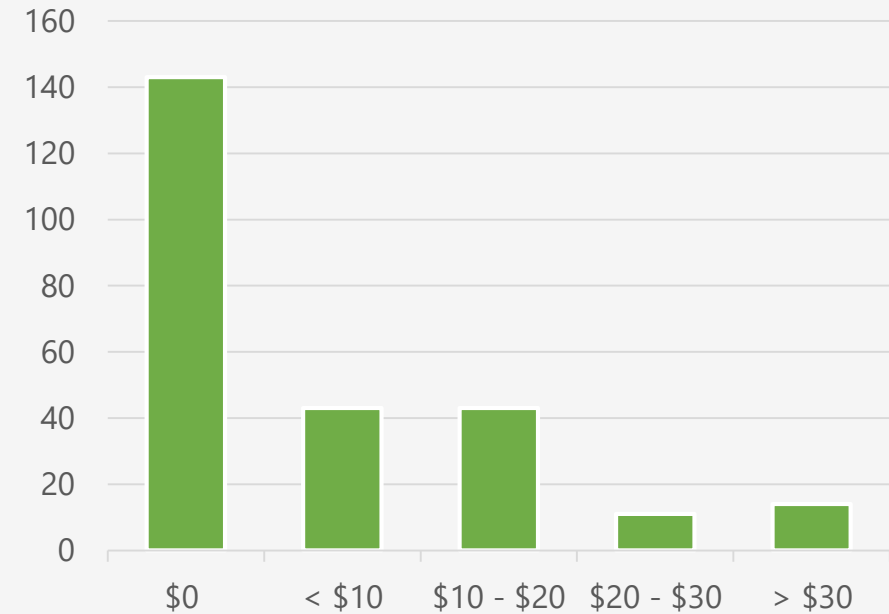
The broadband standard varies by organization. For example, ConnectME designates areas unserved by broadband as those that have internet speeds below 50 Mbps for download and 10 Mbps for upload. The FCC defines the minimum standard for broadband as 25 Mbps download and 3 Mbps upload.

Island by Island: Peaks Island (continued)

Cost of Internet Service



How Much More are Residents Willing to Pay?



Island by Island: ISP Satisfaction*

	Cliff Island	Cushing Island	Little Diamond Island	Great Diamond Island	Peaks Island	Avg.
Customer Service	3.7	3.0	2.7	2.9	2.9	3.0
Speed	3.7	3.0	2.2	2.0	3.1	2.8
Cost	3.3	3.1	3.4	3.5	3.8	3.4



*Respondents rated customer service, speed, and cost on a scale of 1 (not at all satisfied) to 5 (extremely satisfied).

Results: All Islands



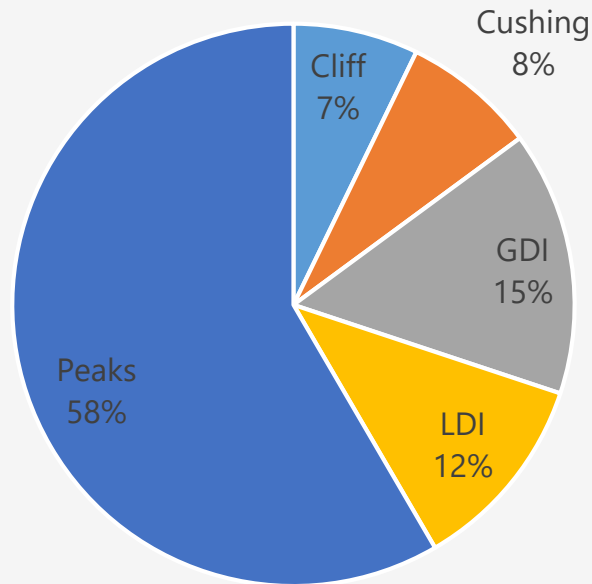
Who Answered the Survey?

The "Respondents" chart depicts the percent of total responses received from each island.

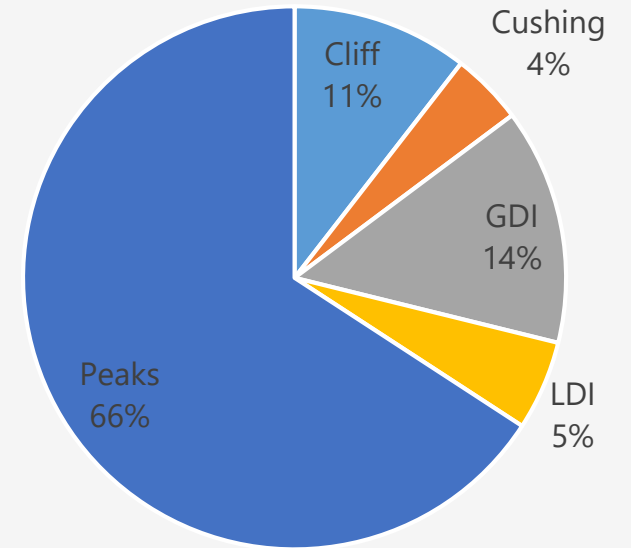
The "Total Properties" chart depicts what percentage of total island properties are located on each island.

In comparing these charts, although Cliff and Peaks may be slightly underrepresented, staff are satisfied overall with how each island is represented in the total number of responses received.

Respondents



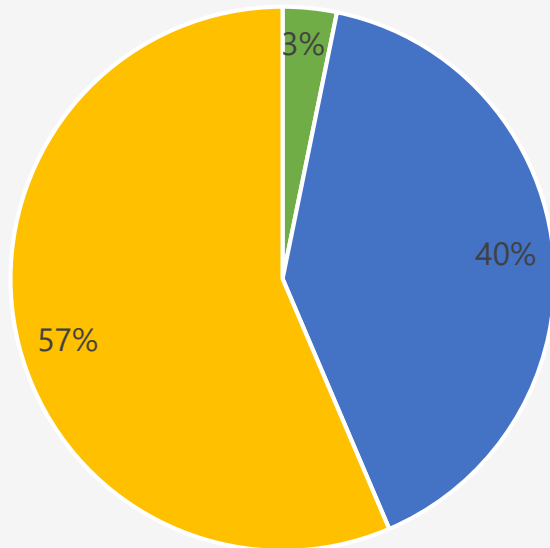
Total Properties



What Type of Island Property Do Respondents Own?

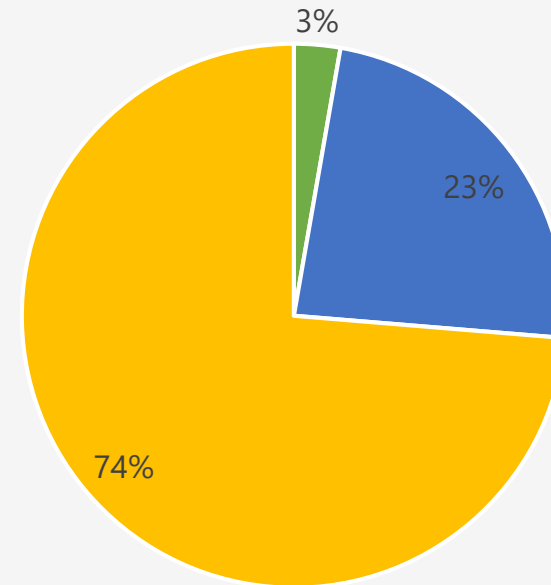
All Islands

■ Rental ■ Primary Home ■ Seasonal Home



Cliff, Cushing, GDI, and LDI*

■ Rental ■ Primary Home ■ Seasonal Home

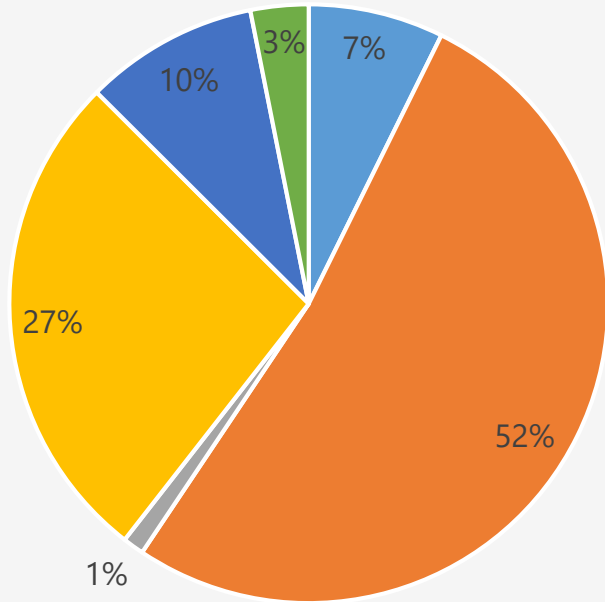


* Data omitting Peaks Island is included throughout to control for the Island's relatively strong internet service.

Who Are Their Current Internet Providers?

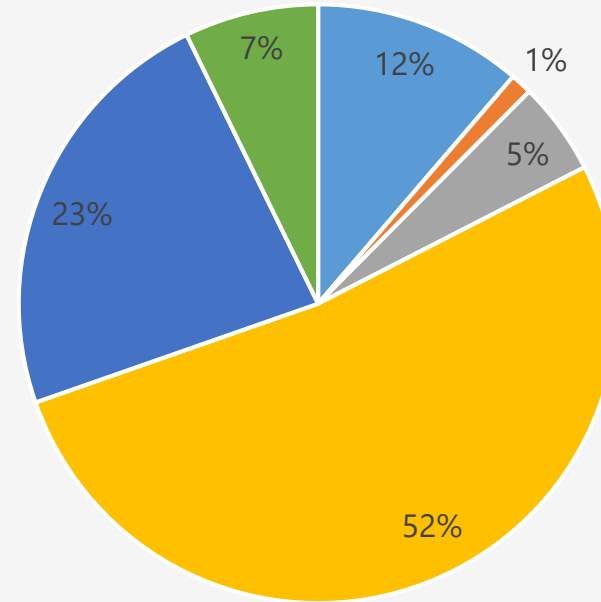
Current ISP

■ None ■ Spectrum ■ Axiom ■ Consolidated ■ Redzone ■ Other



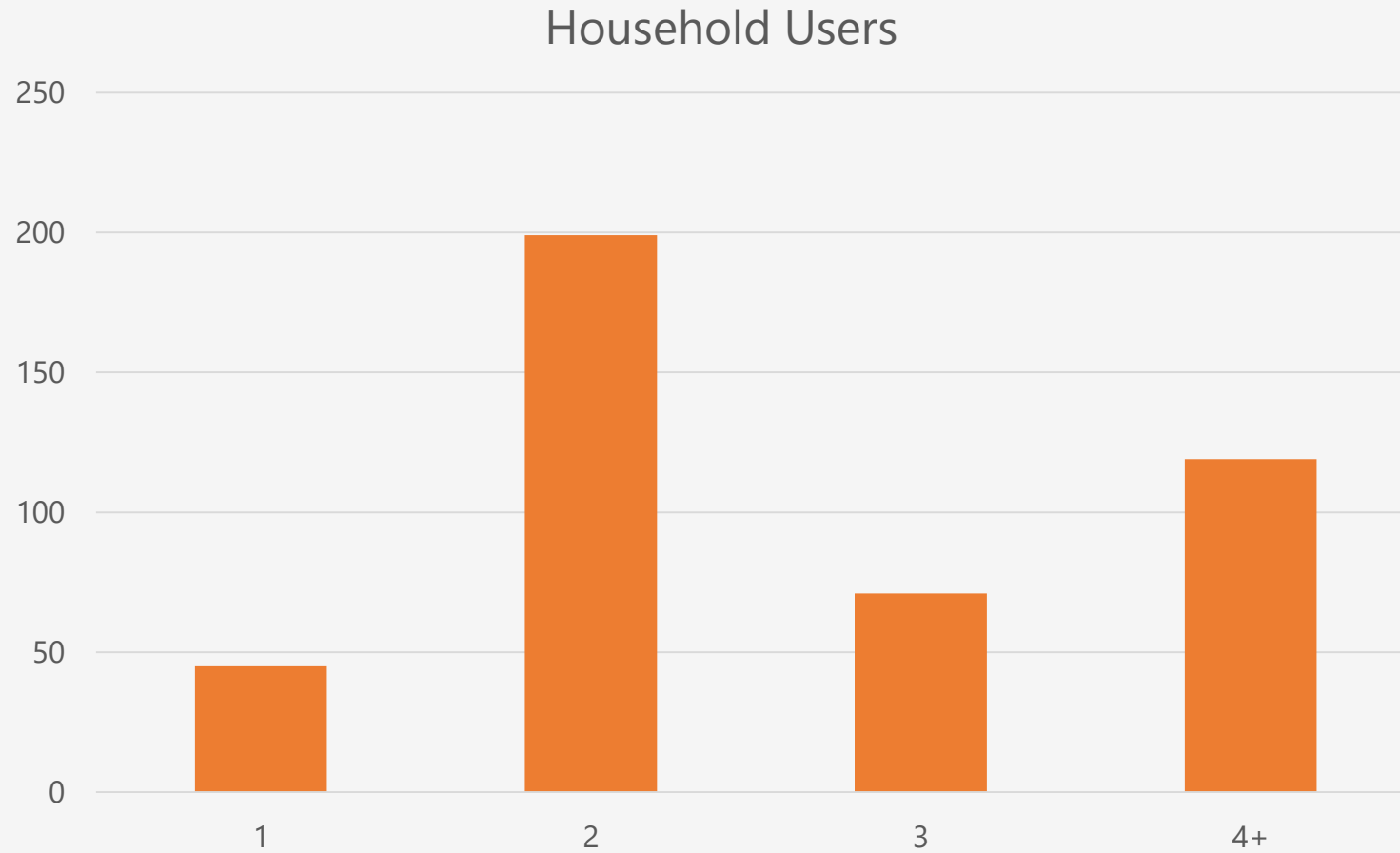
Cliff, Cushing, GDI, and LDI*

■ None ■ Spectrum ■ Axiom ■ Consolidated ■ Redzone ■ Other



* Data omitting Peaks Island is included throughout to control for the Island's relatively strong internet service.

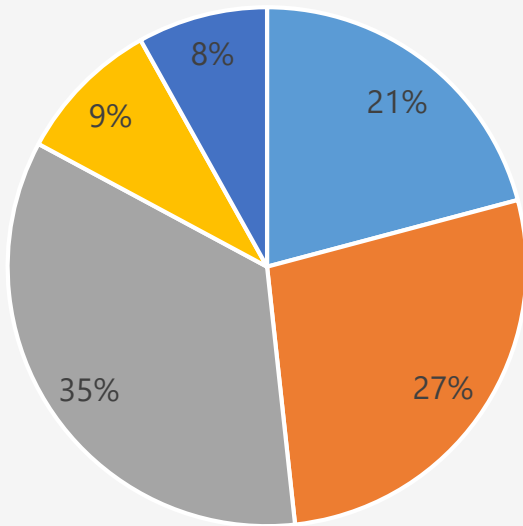
How Many Members of Your Household Use the Internet Regularly?



How Do Island Households Use the Internet?

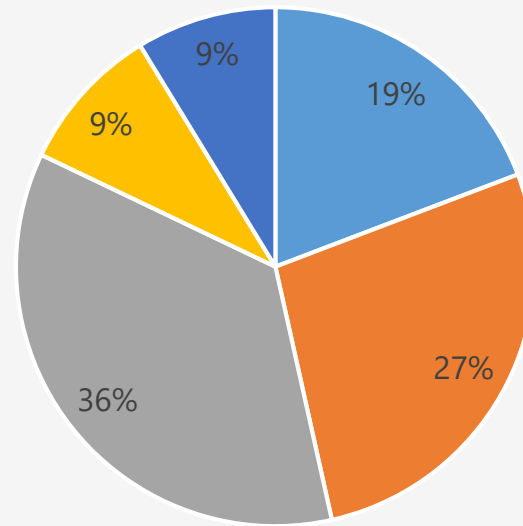
All Islands

■ Telehealth ■ Remote Work ■ Leisure ■ School ■ Homework



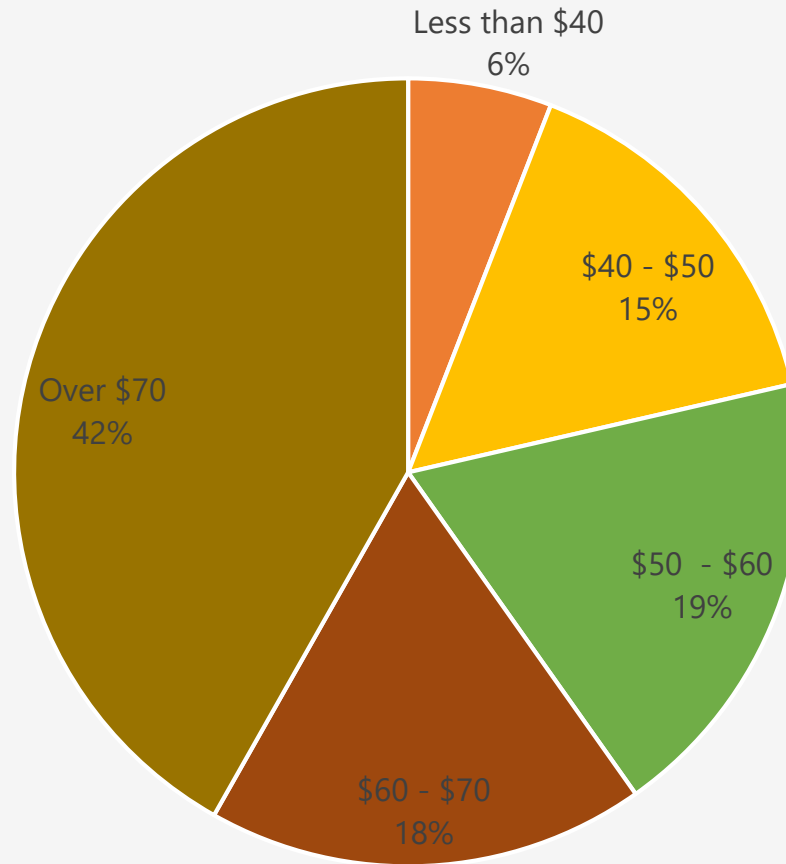
Cliff, Cushing, GDI, and LDI*

■ Telehealth ■ Remote Work ■ Leisure ■ School ■ Homework



* Data omitting Peaks Island is included throughout to control for the Island's relatively strong internet service.

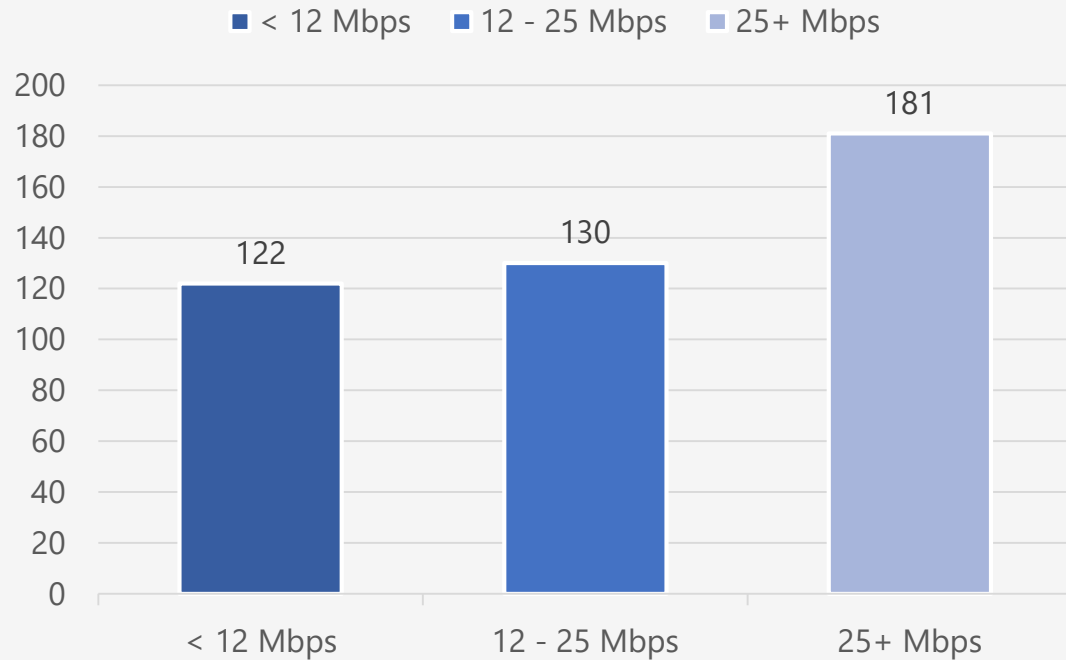
What Is the Monthly Cost of Your Internet Service?



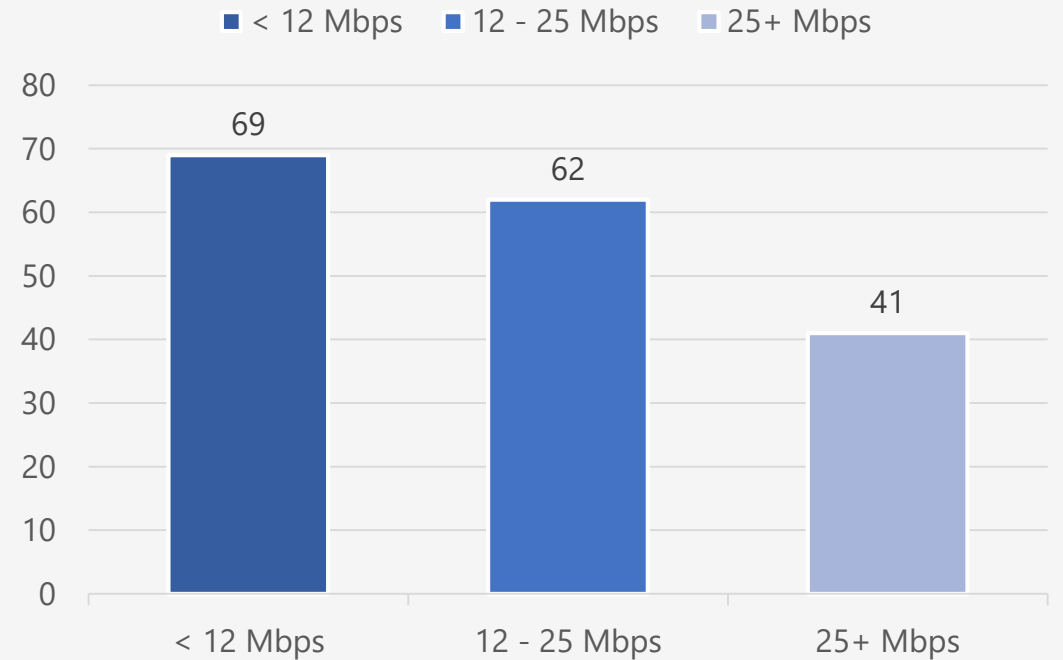
What Are Your Current Download Speeds?

The broadband standard varies by organization. For example, ConnectME designates areas unserved by broadband as those that have internet speeds below 50 Mbps for download and 10 Mbps for upload. The FCC defines the minimum standard for broadband as 25 Mbps download and 3 Mbps upload.

All Islands



Cliff, Cushing, GDI, and LDI

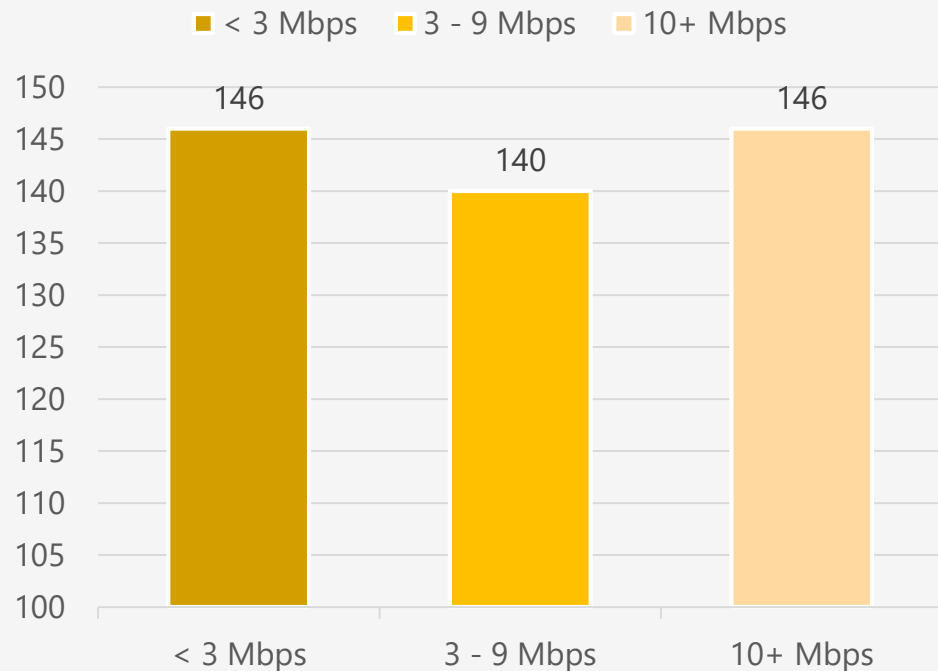


* Data omitting Peaks Island is included throughout to control for the Island's relatively strong internet service.

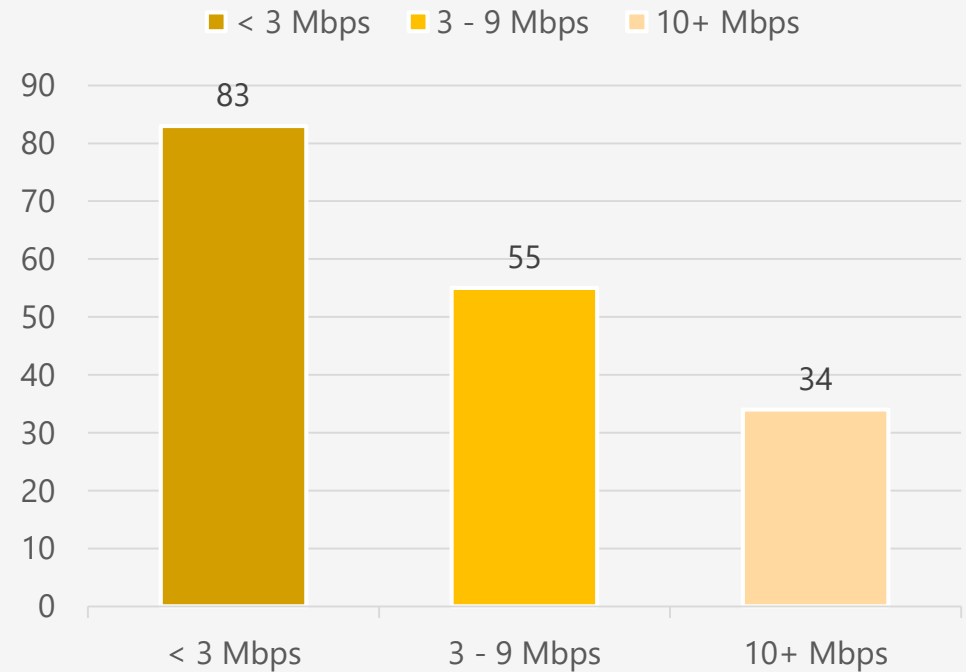
Current Upload Speeds

The broadband standard varies by organization. For example, ConnectME designates areas unserved by broadband as those that have internet speeds below 50 Mbps for download and 10 Mbps for upload. The FCC defines the minimum standard for broadband as 25 Mbps download and 3 Mbps upload.

All Islands

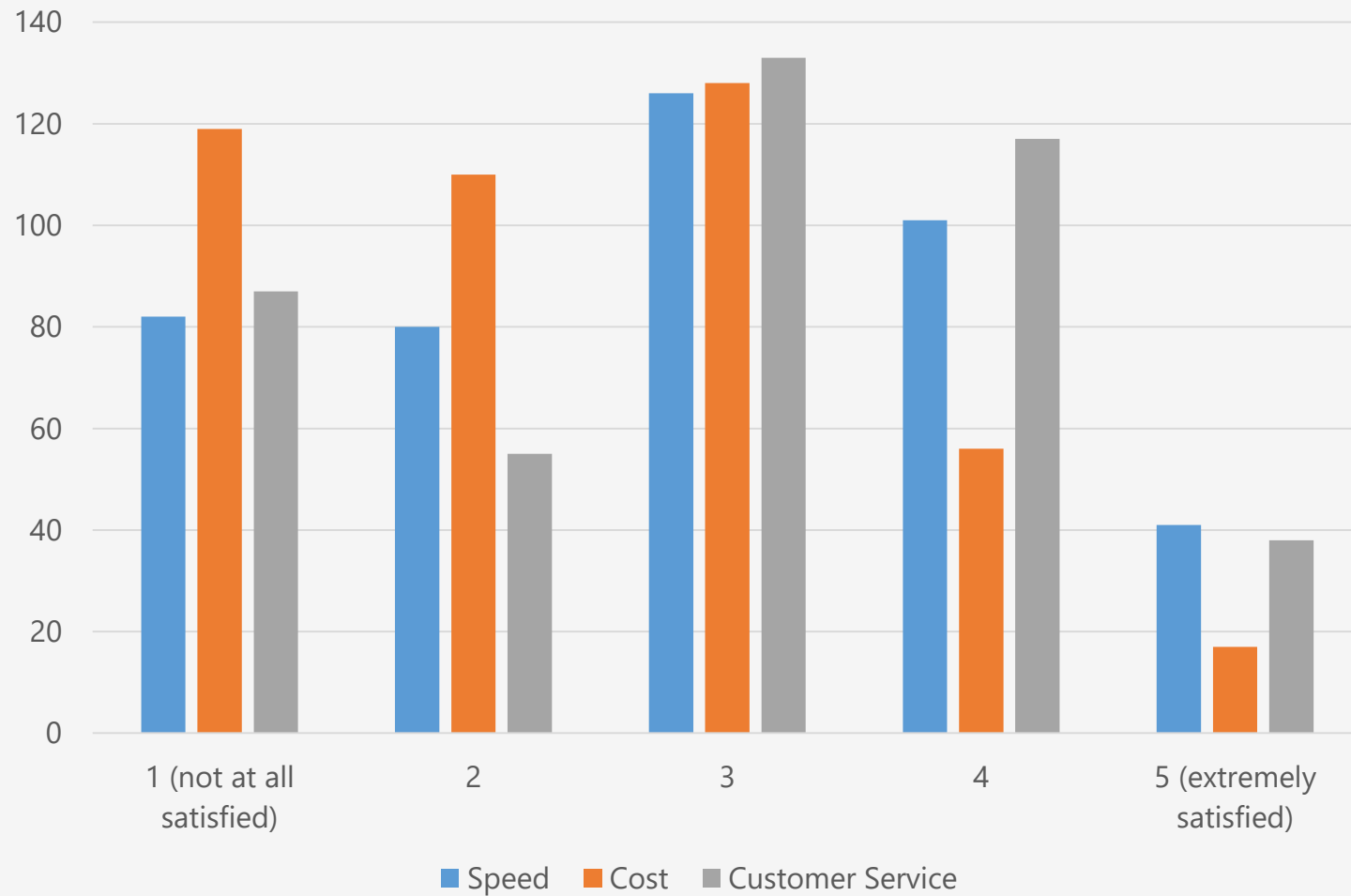


Cliff, Cushing, GDI and LDI*

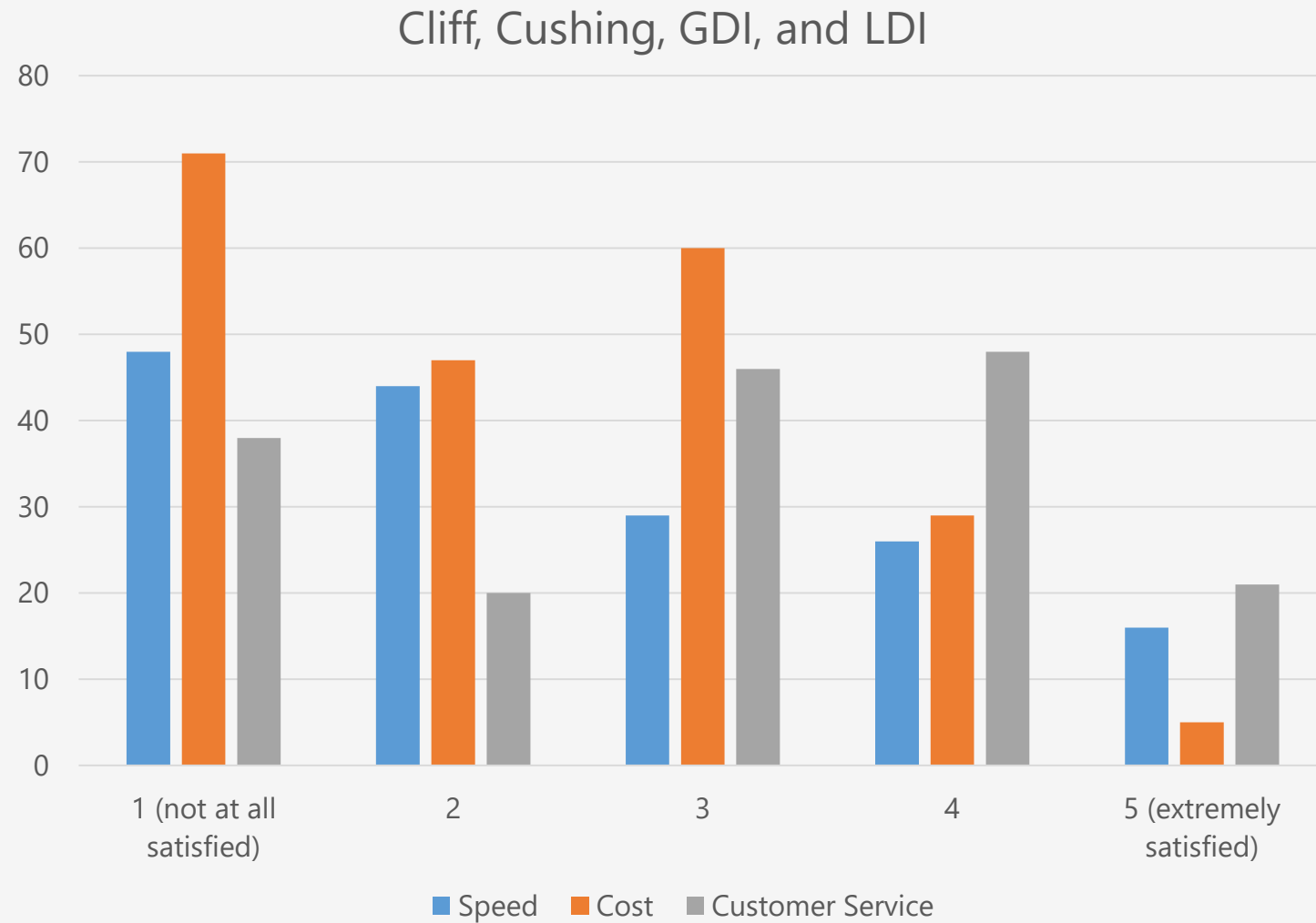


* Data omitting Peaks Island is included throughout to control for the Island's relatively strong internet service.

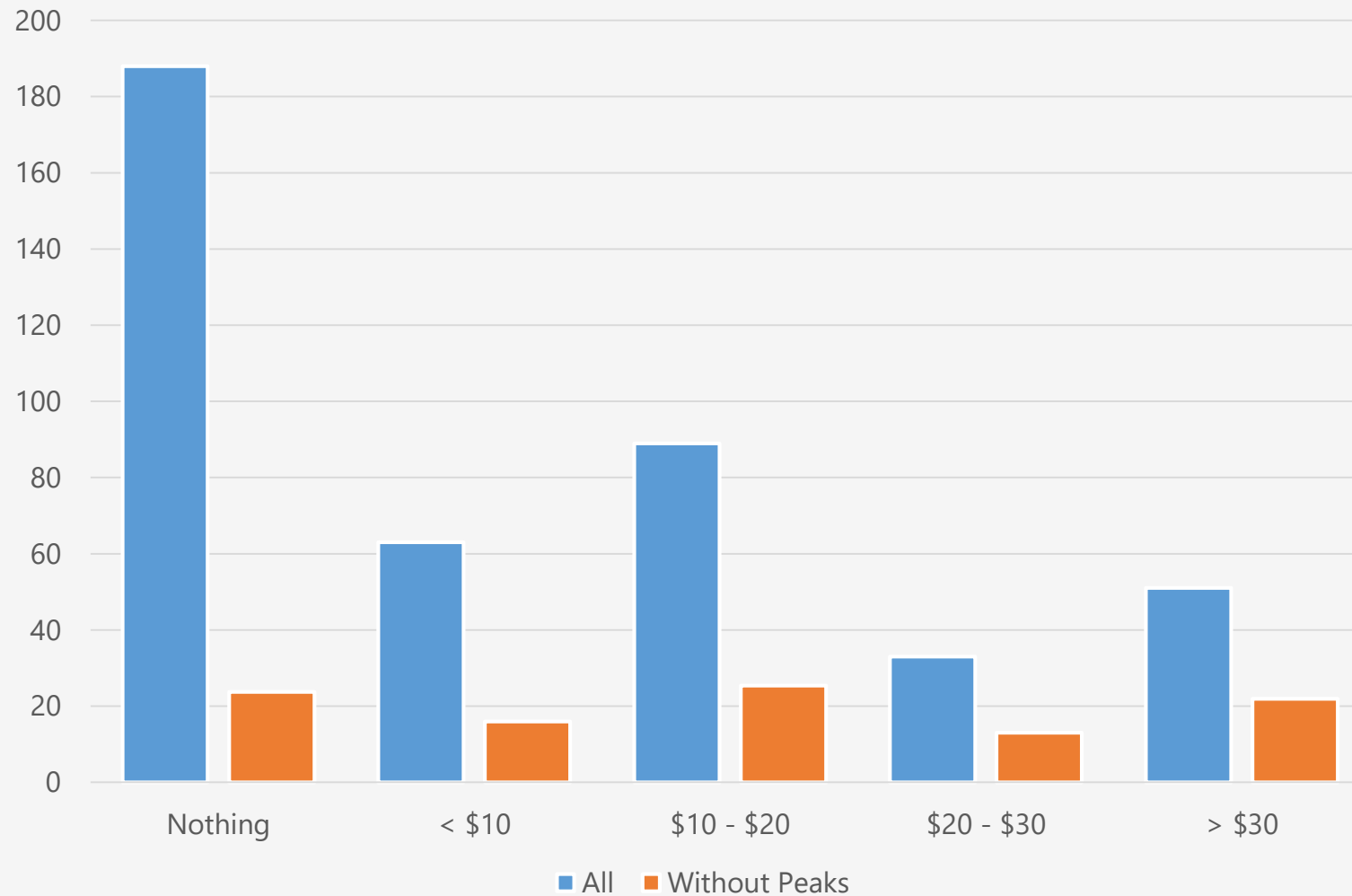
Internet Service Providers: Are Residents Satisfied?



Internet Service Providers: Are Residents Satisfied? (continued)



How Much More Would You Pay for Better Service?



Questions | Thoughts | Feedback





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Executive Department
Jon P. Jennings, City Manager

Introduction

In 2021, the Portland City Manager established a Broadband Planning Committee to evaluate internet service on Cushing Island, Great Diamond Island, Little Diamond Island, and Peaks Island, as well as residents' desire for and interest in investing in service improvements.

Committee members included a representative from each island community, as well as City staff. Over the course of one year, the Committee learned about how other island communities have established broadband, met with various internet service providers, and distributed a survey to all island property owners.

Please visit portlandmaine.gov/broadband for recorded Committee meetings and related documents, including survey results.

Internet Broadband Survey

This survey was conducted in June 2021 and provides a useful snapshot of service penetration and satisfaction within island communities. Results are provided for each island, as well as in aggregate. Visit portlandmaine.gov/broadband to view the final report.

Next Steps

ConnectME [has recognized](#) that a planning process such as the one undertaken by the Broadband Planning Committee can sometimes get stuck, typically “when they reach a point where they have some data on who is served and not, and have talked with the other community members on what a high quality broadband connection can mean.”

They recommend that each community works to answer three questions:



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Jon P. Jennings, City Manager

1. Do you want universal service? (This is service that reaches everyone.)
2. Do you want a FTTP project that is going to essentially lay down the infrastructure your community will use for the next 30-50 years?
3. Do you want to own the infrastructure – or do you want to have an ISP own the infrastructure?

The questions of how services will be funded and structured are daunting, but it cannot be answered until the above decisions are made. It is strongly recommended that each community work to answer these questions.

Definitions & Concepts

Broadband: In the U.S., broadband standards are defined nationally by the Federal Communications Commission (FCC), and also sometimes by states, as is the case in Maine. The Federal Communications Commission (FCC) definition of broadband is any connection that provides 25 megabits per second (Mbps) for downloads and 3 Mbps for uploads. The State of Maine defines broadband as a symmetrical (same speed for downloads and uploads) connection of 100 Mbps. In general, “broadband” refers to high-speed internet, or the transmission of wide bandwidth data over a high speed internet connection.

Cable Internet Service: This service uses cable wires, rather than telephone wires, to deliver high-speed internet. The result is faster service.

Cable Modem: Cable modem service enables cable operators to provide broadband using the same coaxial cables that deliver pictures and sound to your TV set, though you can still watch cable TV while using a cable modem service. Transmission speeds vary depending on the type of cable modem, cable network and traffic load. Speeds are comparable to or exceed typical residential DSL.

ConnectME Authority: A public agency in Maine whose mission is to facilitate the universal availability of broadband to all Maine households and businesses. Visit maine.gov/connectme for more information.



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Executive Department
Jon P. Jennings, City Manager

DSL (“Digital Subscriber Line”): This technology exclusively uses your local phone line to transfer data and connect you to the internet.

Fiber: Fiber optic technology transmits data via fiber-optic cable, with the potential to transmit it as fast as up to 70% the speed of light. The speed customers experience depends on how close to your computer the fiber is installed and how the service is configured.

Fiber to the Premises (FTTP): A network of fibers that extends all the way to the end-user premises, with equipment designed and optimized for use in residential applications. This is currently considered to be the “gold standard” in municipal network design, but is also the most expensive to build.

Measuring Connection Speeds: Connection speeds are typically measured in kilobits per second (Kbps), megabits per second (Mbps), or gigabits per second (Gbps). Measuring both upload and download speeds is important to determining the performance of a service.

Satellite: Satellite broadband, a form of wireless broadband, is useful for serving remote or sparsely populated areas. Downstream and upstream speeds for satellite broadband depend on several factors, including the provider and service package purchased, the consumer's line of sight to the orbiting satellite, and the weather. Satellite service can be disrupted in extreme weather conditions. Speeds may be slower than DSL and cable modem, but the download speed is still much faster than the download speed with dial-up internet access.

Unserved: The FCC defines those that are unserved by broadband as those with speeds of under 25 Mbps down/3 Mbps up. The State of Maine defines “unserved” as those with speeds of under 50mbps down/10mbps up.

Wireless: A network that provides access to the Internet by transmitting over the air. Examples of wireless internet are Wi-Fi hotspots within the home, as well as 3G/4G cellular data service from telephone carriers. In rural areas, satellites also provide wireless internet service.

Broadband Business Models

The ownership/operational structure of a broadband network can vary. Examples of various business models can be found in a 2015 study completed by Tilson for the Island Institute (see page 191 [here](#)).



CITY OF PORTLAND
Executive Department
Jon P. Jennings, City Manager

Internet Service Providers

We recommend that communities interested in learning more about broadband solutions and existing services contact internet service providers. Please contact citymanager@portlandmaine.gov if you feel an introduction would be helpful.

Those that already serve at least one of the islands represented on the Broadband Planning Committee are marked as “incumbent” - others are regional providers who have experience in working with island communities.

- [Axiom](#)
- [Consolidated](#) (incumbent)
- [GWI](#)
- [Redzone](#) (incumbent)
- [Spectrum](#) (incumbent)

The inclusion of these providers does not constitute an endorsement by the City of Portland.