

Appendix E Additional Data Regarding Currently Available Internet Options

2016-10-24

Introduction

There are four important parameters that characterize an Internet connection: download speed, upload speed, latency, and data allowance.

Download and upload speeds are measured in megabits per second (Mbps), latency is measured in milliseconds (ms) and data allowances in gigabytes (GB).

The download speed is how fast you can pull data from the server to you. Most connections are designed to download much faster than they upload, since the majority of online activity, like loading web pages or streaming videos, consists of downloads. Download speed is measured in megabits per second (Mbps).

The upload speed is how fast you send data from you to others. Uploading is necessary for sending big files via email, or in using video-chat to talk to someone else online (since you have to send your video feed to them). Upload speed is measured in megabits per second (Mbps).

Latency is the reaction time of your connection—how fast you get a response after you've sent out a request. Latency is measured by a utility called ping and is reported as ping speed. A fast ping means a more responsive connection, especially in applications where timing is everything (like video games). Ping is measured in milliseconds (ms).

An Internet data allowance is the amount of data you can download and upload without incurring extra charges or speed reductions.

High download speeds are important if you download a lot of data. High ping speeds and low upload speeds can make some uses of the Internet, such as video conferencing, unusable. Data allowances are important if you stream movies from the Internet since a full length feature film is 3-4 GB.

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Long Island Internet Providers

Long Island Community Library

Availability

The Maine School Library Network (MSLN) offers free high speed Internet at the library via WiFi. It is available 24 hours a day but only in the area immediately around the library.

Speeds

Depending on the strength of the WiFi signal you can get speeds up to 50 Mbps both down and up. Ping speeds are fast, in the range 5-10 ms. For computers wired directly to the network inside the library speeds can be up to 100 Mbps both up and down.

Data Allowance

Unlimited.

FairPoint Communications

Availability

FairPoint offers DSL Internet on the island via its telephone lines and is generally available everywhere.

Speeds

FairPoint currently offers 3 Internet plans on Long Island. Speeds are advertised as “up to”, meaning the plan available to you depends on your distance from a network hub (RT), the condition of your telephone wire and the amount of Internet traffic at the hub.

Plan 1	Plan 2	Plan 3
3 Mbps down	7 Mbps down	15 Mbps down
1 Mbps up	1 Mbps up	1 Mbps up

Data Allowance

Unlimited.

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Notes

FairPoint does not advertise ping speeds but on-island testing shows them to be pretty good, in the 40-100ms range.

There are three telephone hubs on the island; on the west end near Thistle Lane, in the middle near the town garage and on the east end near the end of Eastern Avenue.

The FairPoint Internet service is generally quite reliable but suffers from speed degradation in busy times and with multiple users in single households.

Redzone Wireless

Availability

Redzone Wireless, based in Camden Maine, is a newcomer to the Internet provider business in our area. A couple of years ago they installed a system in Diamond Cove on Great Diamond Island. Their wireless transmitting and receiving antenna is located on the Great Diamond water tower and provides limited coverage on the west end of Long and on Island Avenue to the east provided you have a relatively unobstructed line of sight to the water tower.

Speeds

Redzone currently offers two Internet plans. Advertised speeds are “up to” speeds

Fast	2x Faster
10 Mbps down	20 Mbps down
1 Mbps up	2 Mbps up

Data Allowance

Unlimited.

Notes

Ping speeds are not advertised. On island testing shows them to be quite variable, in the 40-200 ms range. Data rates, download and upload speeds, also tend to be variable.

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Satellite Companies

Availability

Satellite Internet is available anywhere on the island where a dish can be located that can see the satellite. There is one generally available satellite Internet provider in the Portland area, Hughes Net.

Speeds

Hughes Net offers 4 Internet plans. Speeds are advertised as “up to”

Choice	Prime Plus	Pro Plus	Ultra
5 Mbps down 1 Mbps up	10 Mbps down 1 Mbps up	10 Mbps down 2 Mbps up	15 Mbps down 2 Mbps up

Data Allowance

Choice	Prime Plus	Pro Plus	Ultra
55 GB	60 GB	65 GB	100 GB

Notes

Hughes Net does not advertise ping speeds but they are generally 7-12 times slower than ground based Internet since the signal must travel up to the satellite and back down. The satellite is 22,000 miles above the earth which at the speed radio waves travel means the round trip takes about 250 ms.

Cell Phone Companies

Availability

All cell phone providers offer data plans. Cell coverage on the island is non-existent in some areas and not so good in most areas. You must have a decent cell signal for Internet.

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Speeds

Here's list of reported (Jun 2016 PC Magazine) speeds for the major cell providers in the rural northeast.

	AT&T 4G	Sprint 4G	T-Mobile 4G	Verizon 4G
Down				
Max	94 Mbps	95 Mbps	95 Mbps	130 Mbps
Ave	21 Mbps	13 Mbps	22 Mbps	26 Mbps
Up				
Max	23 Mbps	17 Mbps	37 Mbps	36 Mbps
Ave	7 Mbps	5 Mbps	13 Mbps	11 Mbps
	AT&T 4G	Sprint 4G	T-Mobile 4G	Verizon 4G
Ave. Ping	49 ms	81 ms	61 ms	64 ms

Data Allowance

Cell provider data allowances vary widely and can add significant expense to an already expensive cell service contract.

Notes

Data rates are highly variable. On island testing has found download speeds as high as 25 Mbps and upload speeds as high as 16 Mbps. These speeds are only available on the bay side of the island with a clear view of the cell towers on the mainland.