# **Internet Service Provider Network Management Practices and Disclosure**

Act 169 requires the Attorney General to "review network management practices of Internet service providers in Vermont and, to the extent possible, make a determination as to whether the provider's broadband Internet access service complies with the open Internet rules contained in the Federal Communications Commission's 2015 Open Internet Order, "Protecting and Promoting the Open Internet," and shall disclose findings "on a publicly available, easily accessible website."

In light of the number of Internet service providers in Vermont, the sheer volume of public and private information about their services, and the changes made by the FCC's 2018 Order "Restoring Internet Freedom" it is not practicable to issue an opinion as to the extent to which providers comply with the 2015 Order. Rather, the Attorney General offers consumers the opportunity to quickly and easily identify their own providers and review their network management practices so they can come to their own conclusions and make their own choices with respect to internet service, network management practices, and/or "net neutrality" principles.

**NOTE**: The representations below are made by the companies themselves and do not necessarily reflect the views of the Vermont Attorney General. Consumers who wish to make a complaint should contact the Consumer Assistance Program at 800-649-2424 or email AGO.CAP@vermont.gov.

FCC ISP Disclosure Information Portal: https://www.fcc.gov/how-find-your-isps-disclosure-statement

## **Network Management Disclosures:**

COMPANY	ISP Network Management Disclosure Page
AT&T	https://www.att.com/legal/terms.openinternetpolicy
	The FCC's <i>Open Internet Order</i> , which reflected that collaborative process, established rules for wireless and wireline broadband Internet access services in three areas:
	<ul> <li>Rule 1: Transparency. A person engaged in the provision of broadband Internet access service shall publicly disclose accurate information regarding the network management practices, performance, and commercial terms of its broadband Internet access services sufficient for consumers to make informed choices regarding the use of such services and for content, applications, services, and device providers to develop, market, and maintain Internet offerings.</li> <li>Rule 2: No Blocking. A person engaged in the provision of fixed broadband Internet access service, insofar as such person is so engaged, shall not block lawful content, applications, services, or non-harmful devices, subject to reasonable network management.  A person engaged in the provision of mobile broadband Internet access service, insofar as such person is so engaged, shall not block consumers from accessing lawful websites, subject to reasonable network management; nor shall such person block applications that compete with the provider's voice or video telephony services, subject to reasonable network management.</li> <li>Rule 3: No Unreasonable Discrimination. A person engaged in the provision of fixed broadband Internet access service, insofar as such person is so engaged, shall not unreasonably discriminate in transmitting lawful network traffic over a consumer's broadband Internet access service. Reasonable network management shall not constitute unreasonable discrimination.</li> </ul>
	Consistent with the net neutrality rules, AT&T has created a Broadband Information website where, at one convenient location, subscribers and content, devices, applications, and services providers can obtain information
	regarding the network management practices, performance, and commercial terms of AT&T's wireline and wireless
	mass market broadband Internet access services. For example, we describe the factors that can affect the
	performance of our broadband Internet access services, with links to sites where customers can obtain more
	information. We also provide links to sites for detailed information regarding AT&T's rate plans, terms of service, and

	acceptable use and privacy policies. And we describe our network management practices, including the measures
	we take to manage congestion on our wireless network and to guard against a variety of security threats (such as
	viruses, botnets, distributed denial of service attacks, and spam). We also make clear that customers are free to
	attach any compatible 3G or 4G capable device of their choice to our broadband Internet access services, provided
	such devices do not harm our network, and that we do not favor certain Internet applications by blocking, throttling or
	modifying particular protocols in ways not prescribed by protocol standards.
Burlington	https://www.burlingtontelecom.com/legal/#legal-form
Telecom	Consistent with FCC regulations,[1] the City of Burlington d/b/a Burlington Telecom ("BT") provides this
	information about our broadband Internet access services. We welcome questions or comments about this
	information. You may contact us at (802) 392-9104
	Network Practices
	<b>General description.</b> We provide a variety of broadband Internet access service offerings to our residential and
	business customers. We provide the services over fiber optic lines connecting to the Internet. We monitor our
	network and traffic patterns and make changes we deem necessary to manage and improve overall network
	performance. We use reasonable, nondiscriminatory, network management practices to improve overall network
	performance to ensure a high-quality online experience for all users. Our network management practices do not
	target any specific content, application, service, or device. As network management issues arise and as
	technology develops, we may employ additional or new network management practices. We will update these
	disclosures as necessary.
Century Link	https://www.centurylink.com/aboutus/legal/internet-service-disclosure/full-version.html
	CenturyLink does not otherwise block, prioritize, or degrade any Internet sourced or destined traffic based on
	application, source, destination, protocol, or port unless it does so in connection with a security practice
	described in the security policy section below.
Charter	https://www.spectrum.com/policies/network-management-practices
Spectrum	Charter does not block or degrade its Customers' ability to access lawful content or services. Charter reserves the
	right to employ network management practices to prevent certain harmful or illegal activity including without
	limitation the distribution of viruses or other malicious code (e.g., botnets) or the transfer of child pornography or
	other unlawful content (e.g., Digital Millennium Copyright Act/DMCA violations).
Cloud	http://www.cloudalliance.com/legal/open/
Alliance	The FCC's rules focus on these primary issues:
	• Transparency: Fixed and mobile broadband providers must disclose the network management practices,
	performance characteristics, and terms and conditions of their broadband services;
	No blocking: Fixed broadband providers may not block lawful content, applications, services, or non-harmful
	devices; mobile broadband providers may not block lawful Web sites, or block applications that compete with
	their voice or video telephony services; and
	• No unreasonable discrimination: Fixed broadband providers may not unreasonably discriminate in transmitting
	lawful network traffic.
	• Reasonable network management: ISPs may engage in reasonable network management to maintain a high
	quality of service for broadband Internet access.
	Network Practices
	ISPs must disclose their network practices, specifically in the four general areas listed below. ISPs may not block
	lawful content, applications, services, or non-harmful devices, subject to reasonable network management. An ISP
	may not block consumers from accessing lawful Web sites, subject to reasonable network management; nor shall
	the ISP block applications that compete with the provider's voice or video telephony services, subject to
	reasonable network management. ISPs may not unreasonably discriminate in transmitting lawful network traffic
	over a consumer's broadband Internet access service, although, reasonable network management shall not
	constitute unreasonable discrimination.
	The FCC's rules state that a network management practice is reasonable if it is appropriate and tailored to
	achieving a legitimate network management purpose, taking into account the particular network architecture and
	technology of the broadband Internet access service.
	<b>Congestion Management:</b> All wireless systems are necessarily shared ones. Typical constraints come primarily
	from capacity limitations of base-station radios. To a lesser extent, there are also capacity limitations of customer
	premise equipment and the overall capacity of towers/stations. In order to ensure all our subscribers maximally

share the bandwidth available to the system, we employ several techniques. These include limiting the number of

subscribers assigned to any base-station radio, setting base-station radio parameters to equitably share bandwidth when approaching saturation, and balancing the amount of bandwidth that is distributed to each tower/station to be used by each component in the system.

There are a number of other congestion management techniques available to employ, such as limiting the total number of Internet connections per user, limiting the total traffic transfer per user, barring certain types of traffic, and others. We do not employ any of those techniques, at this time.

As described in the next section, all types of lawful traffic are permitted on our system. We set base-station radios so that, during times of especially high traffic, all subscribers' throughput limits are automatically adjusted (proportionally to their service plan speeds) to prevent any individual subscribers from dominating the usage. As soon as this automatic adjustment restores the capacity, the limiting is removed. This process can occur on a second-by-second basis. It can be imperceptible to the typical subscriber, unless the congestion grows extreme. This sort of limiting occurs more frequently during the evening hours, when usage is typically at its highest. We apply a similar system of automatic adjustment at the tower/station level, when total network usage exceeds the available bandwidth. This also is a largely imperceptible second-by-second process. We make every effort to purchase sufficient bandwidth to make this adjustment a rare occurrence.

We do not currently apply usage limits upon our subscribers. Occasionally, we discover a subscriber's connection in continual, full use. We may contact such subscribers to determine if viruses or other malware are afflicting their systems. We sometimes counsel and assist individual subscribers in monitoring their family's or organization's excessive use of peer-to-peer applications or continual long-form video streaming. Continual use of our network is not considered teasonable use and is not permitted.

**Application-Specific Behavior:** We block no applications from our network. Some classes of application are favored over others. For example, time-sensitive, VoIP (voice over Internet protocol telephony) data is prioritized over video, web, and mail traffic. Though we permit peer-to-peer traffic, we give it a lower priority than video, web, and mail. Soon, when our own VoIP product is introduced, its routes and quality will be optimized, but we will not prioritize our own product over third-party VoIP products. We will have no control over how well third parties choose their routes, etc. We do not block any ports, at this time.

**Device Attachment Rules:** Our legacy network requires proprietary devices, which match those at the towers/stations. Only these proprietary devices, which have met our technical standards and are provided by us, may be attached to the network. Our WiMAX™ system does permit attachment of any compatible, non-mobile, WiMAX™ devices, however these need to be qualified by us and will not authenticate on our system without paid subscriptions.

Any devices with ethernet connectivity may be attached to our network at the demarcation point of our customer premise equipment. This would include personal computers and routers.

**Security:** Utilizing the most advanced techniques, we encrypt all traffic in our base-station radios at the towers and additionally in the core router at our network operations center.

# Comcast/Xfi nity

# https://corporate.comcast.com/openinternet/open-net-neutrality

Comcast does not discriminate against lawful Internet content, applications, services, or non-harmful devices. The bullets below provide an overview of Comcast's network practices with respect to its Xfinity Internet broadband Internet access services. Additional information, including more-detailed technical information, is available in the Network Management Information Center.

## **Blocking**

Comcast does not block or otherwise prevent end user access to lawful content, applications, services, or non-harmful devices. Comcast does engage in reasonable network management practices described below and in our Network Management Information Center.

## **Throttling**

Comcast does not degrade or impair access to lawful Internet traffic on the basis of content, application, service, user, or use of a non-harmful device. Comcast does engage in reasonable network management practices described below and in our Network Management Information Center.

## **Affiliated Prioritization**

Comcast does not directly or indirectly favor some traffic over other traffic, including through use of techniques such as traffic shaping, prioritization, or resource reservation, to benefit an affiliate.

#### **Paid Prioritization**

Comcast does not directly or indirectly favor some traffic over other traffic, including through use of techniques such as traffic shaping, prioritization, or resource reservation, in exchange for consideration, monetary or otherwise.

	Network Management
	Comcast manages its network with one goal: to deliver the best possible broadband Internet access service to all
	of its customers. To further this effort, Comcast uses reasonable network management practices that are
	consistent with industry standards. Comcast uses various tools and techniques to manage its network, deliver its
	service, and ensure compliance with the Acceptable Use Policy and the Customer Agreement for Residential
	Services. These tools and techniques are dynamic and can and do change frequently. Network management
	activities may include identifying spam and preventing its delivery to customer email accounts and detecting
	malicious Internet traffic and preventing the distribution of, or inadvertent access to, malware, phishing, viruses,
	or other harmful code or content.
Consolidated	https://www.consolidated.com/support/terms-policies/internet-terms-policies/broadband-management-
Communicat	policiesv Consolidated Communications High-speed Internet customers receive full access to all of the lawful
ions	content, services, and applications that the Internet has to offer. Consolidated Communications does not block,
	prioritize, or degrade any Internet sourced or destined traffic based on application, source, destination, protocol,
	or port unless it does so in connection with a security practice described in the security policy section below.
Dish	https://www.dish.com/downloads/legal/dishNET-Wireline-Network-Management-Policy.pdf
Network	dishNET does not block, prioritize, or degrade any Internet sourced or destined traffic based on application,
	source, destination, protocol, or port unless it does so in connection with a security practice described in the
	Security Policy section below.
Duncan	https://www.duncantelecommunications.com/policies
Cable	
Earthlink	https://www.earthlink.net/tcs/
	EarthLink does not favor certain websites or Internet applications by blocking or throttling lawful Internet traffic
	on the basis of content, application, service, user, or use of nonharmful devices on its broadband Internet access
	services.
ECFiber	http://www.ecfiber.net/cms/wp-content/uploads/2020/03/Subscriber-Agreement.pdf
	ECFiber supports the free flow of information and ideas over the Internet and does not actively monitor use of the
	Service under normal circumstances. Similarly, ECFiber does not exercise editorial control over the content of any
	Web site, electronic mail transmission, news group, or other material created or accessed over or through the
	Service, except for certain proprietary websites.
Fibercast	http://www.fibercast.net/stw/index.php/86-static-pages/144-open-internet-transparency-disclosure
	Blocking:
	FiberCast does not block or otherwise prevent end user access to lawful content, applications, service, or non-
	harmful devices.
	Throttling:
	FiberCast does not engage in any practice that degrades or impairs access to lawful Internet traffic on the basis of
	content, application, service, user, or use of non-harmful device.  Affiliated Prioritization:
	FiberCast does not engage in any practice that directly or indirectly favors some traffic over other traffic, including
	through use of techniques such as traffic shaping, prioritization, or resource reservation, to benefit an affiliate.
Firstlight	https://www.firstlight.net/wp-content/uploads/2018/06/Internet Transparency Disclosures 6-11-18.pdf.
instiigiit	FirstLight complies with net neutrality principles and, as such, provides open access to all lawful content without
	discrimination, restriction or interference.
Franklin	http://www.franklinvt.net/
Telephone	
GlobalNet	http://www.surfglobal.net/terms.php
Internet	
Services	
Google Fiber	https://fiber.google.com/legal/network/
	Google Fiber does not prevent or impede the use of any other product or service that its subscribers choose to
	access over their Google Fiber Internet service as long as the use of that product or service does not violate the
	service terms and conditions. Google Fiber also does not favor or inhibit any applications or classes of applications
	except as described herein.
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Granite	http://www.granitenet.com/Legal
Telecommun	http://www.gramenec.com/ Ecgar
ications	
Hughes Net	https://legal.hughesnet.com/NetworkManagement.cfm
l raighte rec	Hughes provides its customers with full access to all the lawful content, services, and applications that the
	Internet has to offer. As indicated above, we evaluate the type of content (Web, mail, P2P, file transfer) and
	assign it a priority. We do not discriminate on the basis of the content provider or source or the content.
	However, we are committed to protecting customers from spam, phishing, and other unwanted or harmful online
	content and activities. Hughes uses industry-standard tools and generally accepted best practices and policies to
	help it meet this customer commitment.
Kingdom	http://kingcon.com/index.php/terms-of-service
Connection	The Kingdom Connection (Merrill Information Systems, Inc.) does not and cannot control the content, quality or
22	accuracy of information available through its system or over the Internet in general.
LocalNet	https://www.localnet.com/policies.php
	LocalNet does not monitor or exercise editorial control over the content of any free personal web site,
	commercial web site, email, mailing list, newsgroup or other information accessible from the Internet through
	LocalNet. LocalNet does, however, reserve the right to cancel any account or remove any material LocalNet
	becomes aware of that is, in LocalNet's sole discretion, potentially illegal, could subject LocalNet to liability, or
	violate this Policy.
New England	http://www.newisp.net/tos.html
Wireless\	We respect our customers' privacy at NEWco. We exercise no control over the content of the information passing
	through NEWco.
North	https://www.nbnworks.net/reNBN.html#mission
Branch	
Networks	
Shoreham/O	https://www.otelco.com/pdfs/Rates Terms Conditions Broadband Access Service 7 1 2017.pdf
TT	
Telephone	
Skycasters	https://www.skycasters.com/subscriber-agreement/
Sprint	https://www.sprint.com/en/legal/open-internet-information.html
	Sprint strives to deliver to its customers access to all the lawful, legitimate and non-infringing content that the
	Internet has to offer. However, we are committed to protecting our network and customers from spam, phishing,
	viruses, malware, security attacks and other unwanted harmful or malicious online activities. Sprint uses industry
	standard tools and generally accepted best practices and policies including our own analysis and third party
	intelligence to help it meet this goal. In cases where these tools and policies identify certain traffic patterns,
	addresses, or destinations as being harmful or malicious, Sprint may deploy technical controls to block or prevent
	access to harmful or malicious traffic. In other cases, these tools and policies may permit customers to identify
	certain content that is not clearly harmful or unwanted, such as bulk email or websites with questionable security
	ratings, and enable those customers to inspect the content further if they want to do so. Sprint does not block
	sites based on content or subject, unless the Internet address hosts unlawful content or is blocked as part of an
	opted-in customer service.
Stowe Cable	https://static1.squarespace.com/static/5616faaee4b0e983384bb383/t/56175b08e4b0521d56921dbd/14443712
	<u>08096/StoweCommunicationsAccUsePolicyHighSpeedInterent.pdf</u>
	Stowe Communications uses various tools and techniques to manage its network, deliver the Service, and ensure
	compliance with this Policy and the Subscriber Agreement. These tools and techniques are dynamic, like the
	network and its usage, and can and do change frequently. For example, these network management activities
	may include (1) identifying spam and preventing its delivery to customer e-mail account, (2) detecting malicious
	Internet traffic and preventing the distribution of viruses or other harmful code or content, (3) temporarily
	lowering the priority of traffic for users who are the top contributors to current network congestion, and (4) using
	other tools and techniques that Access may be required to implement in order to meet its goal of delivering the
	best possible broadband Internet experience to all of its customers.
TDS	https://tdstelecom.com/policies/acceptable-use-policy.html
	We monitor our network and traffic patterns and make changes we deem necessary to manage and improve
1	overall network performance. We use reasonable, nondiscriminatory, network management practices to improve
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	overall network performance to help provide a high-quality online experience for all users. As network
	management issues arise and as technology develops, we may employ additional or new network management
	practices. We will update these disclosures as necessary.
T-Mobile	https://www.t-mobile.com/responsibility/consumer-info/policies/internet-service
	Important information about T-Mobile's Broadband Internet Access Services and T-Mobile's Open Internet Disclosures This page provides information about T-Mobile's Broadband Internet Access Services. "Broadband Internet Access Services" refers to services that provide the capability to transmit data to and receive data from all or
	substantially all Internet endpoints. The network practices, performance characteristics, and commercial terms applicable to T-Mobile-branded customers on T-Mobile's Broadband Internet Access Services over our 2G, 3G, 4G, and 5G networks are described below. This page does not describe the practices, characteristics, or terms that apply when using roaming partner networks; domestic data roaming information is available <a href="here">here</a> . This page also includes links to other T-Mobile documents containing further information applicable to our Broadband Internet
	Access Services.
Topsham Telephone	https://a1bf29b9-57e1-4519-b4db- 469bca6b85aa.filesusr.com/ugd/fefd1f 3b8da4e71d684c8687cd65e703e9d7f7.pdf
Trans-	https://trans-video.net/terms-and-policies/
Video.net	
U.S. Cellular	https://www.uscellular.com/uscellular/pdf/USCCMobileBroadbandOpenInternetPractices-06-11-18.pdf U.S. Cellular does not block customers from accessing lawful websites or applications nor does it favor access to certain applications or websites over others.
Verizon	https://www.verizon.com/about/our-company/network-management
venzon	Verizon Wireless does not limit, block or rate-control specific protocols or protocol ports other than for security reasons, modify protocol fields in ways not prescribed by the protocol standard, or otherwise inhibit or favor certain applications or classes of applications of traffic on our internet access service.
VTEL	https://www.vermontel.com/network-management-policies-2/ Blocking: VTel does not block or discriminate against lawful content, applications, services, or non-harmful devices, subject to reasonable network management.
	Throttling: VTel does not throttle, impair or degrade lawful Internet traffic on the basis of Internet content, application, or service, or use of a non-harmful device subject to reasonable network management.  Affiliated Prioritization: VTel does not prioritize Internet traffic to the benefit of an affiliate.
	Paid Prioritization: VTel does not engage in paid prioritization. We don't prioritize Internet for consideration to benefit particular content, applications, services or devices.
Waitsfield Cable	https://www.wcvt.com/company/policies/network-transparency-statement/ Blocking: Green Mountain Access does not block or discriminate against lawful content. Throttling: Green Mountain Access does not throttle, impair or degrade lawful Internet traffic. Affiliated Prioritization: Green Mountain Access does not prioritize Internet traffic and has no plans to do so. Paid Prioritization: Green Mountain Access has never engaged in paid prioritization. We don't prioritize Internet for consideration to benefit particular content, applications, services or devices. Green Mountain Access does not
	have plans to enter into paid prioritization deals to create fast lanes.
WaveComm	https://wavecomm.com/broadband-policy/
WINDSTREA M	https://www.windstream.com/about/legal/broadband-network-statement So long as traffic is not malicious or harmful to its network, Windstream does not block or throttle lawful content or traffic on the basis of applications, services, users, or classes of applications sourced from, or destined to, the public Internet.