MINNESOTA DEPARTMENT OF COMMERCE

Telecommunications Access Minnesota

2015 Annual Report to the Public Utilities Commission

Docket No. P999/PR-16-5

Minnesota Department of Commerce | January 29, 2016

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In order to provide equal access to the telecommunications network for people who are deaf, hard of hearing, speech disabled, or physically disabled, the Minnesota Legislature created what is presently known as the Telecommunications Access Minnesota (TAM) program. The Minnesota Relay and the Telephone Equipment Distribution (TED) Program were established to achieve this objective. The programs are funded by a surcharge on all wired and wireless telephone access lines in the state of Minnesota, and by a fee on each Minnesota retail transaction for prepaid wireless telecommunications services.

The current TAM surcharge is $0.07 per access line; by statute, the surcharge may not exceed $0.20 per access line.

The state procedures and requirements regulating Minnesota Relay, the Telephone Equipment Distribution Program, and the Telecommunications Access Minnesota fund fall under Minnesota Statute § 237.50 – 237.56 and Minnesota Rules, Chapter 8775.

The state contracts with Sprint Communications Company, L.P. for the provision of Telecommunications Relay Services (TRS) in Minnesota. The contract is effective from July 1, 2014, through June 30, 2019. In 2015, Minnesotans placed 466,626 relay calls for a total of 1.21 million conversation minutes of use. Overall, Minnesota Relay experienced the following changes in call volume from 2014 to 2015:

- 15% decrease in TTY-based relay calls
- 4% increase in Speech-to-Speech relay calls
- 17% decrease in CapTel relay calls

The migration to Internet-based relay services, which are under the Federal Communications Commission's jurisdiction and paid for through a federal fund, continues to grow as more and more consumers gain access to high-speed Internet. Internet-based relay services tend to be easier to use and have more features. In addition, there are free relay applications that can be downloaded to wireless devices such as smartphones and tablets, allowing the relay user to make calls on the go. There are currently no Internet-based Speech-to-Speech relay services available, which is why we are still seeing an increase in usage on the state funded level.

Although there is a notable shift to Internet-based relay services, until all consumers have access to high-speed Internet, and at an affordable price, there will still be many Minnesotans who rely on traditional relay services.

The TED Program is administered through an interagency agreement between the Department of Human Services – Deaf and Hard of Hearing Services Division and the Department of Commerce – TAM program. In 2015, the TED Program served 642 new participants, 1,467 repeat participants, and distributed 4,046 telecommunications and auxiliary devices.

TED Program staff provide outreach for both the TED Program and Minnesota Relay from Deaf and Hard of Hearing Services Division offices located in St. Paul, Mankato, St. Cloud, Duluth, and Moorhead. In 2015, TED Program staff performed 159 outreach activities reaching 5.317 Minnesotans.

In addition to Minnesota Relay and the TED Program, five additional programs are funded by TAM:
- The Department of Employment and Economic Development – Accessible News for the Blind program has a maximum annual budget of $100,000.
- The Department of Human Services – Rural Real-time Captioning program has a maximum annual budget of $300,000.
- The Commission of Deaf, DeafBlind and Hard of Hearing Minnesotans (MNCDHH) receives $800,000 annually.
- MN.IT Services receives $290,000 annually for coordinating technology accessibility and usability.
- The Legislative Coordinating Commission (LCC) receives $150,000 annually to provide captioning of live streaming of legislative activity on the LCC's website and for a consolidated access fund for other state agencies.

TAM Fund Activity in Fiscal Year 2015

Revenues:

- Wired and Wireless Surcharge Revenue: $5,179,761
- Prepaid Wireless Surcharge Revenue: $417,836
- Account Interest: $3,954

Expenditures:

- TAM Administration: $180,202
- Minnesota Relay Services: $2,147,566
- Minnesota Relay Outreach: $0
- TED Program: $1,360,470
- Rural Real-time Captioning: $238,397
- Accessible News for the Blind: $79,799
- MNCDHH: $800,000
- MN.IT: $290,000
- LCC: $150,000

In 1987, the Minnesota Legislature passed legislation creating the Telecommunications Access for Communication Impaired Persons (TACIP) Board for the purpose of enabling people who have difficulty hearing or speaking on the telephone to talk to standard voice telephone users. Two programs were established to accomplish this goal: Minnesota Relay, which began service on March 1, 1989; and Telephone Equipment Distribution (TED) Program, which began as a pilot program on October 1, 1988.

Minnesota Relay is a federally mandated Telecommunications Relay Services (TRS) program that allows an individual who is deaf, hard of hearing, deaf-blind, or speech disabled to communicate over the telephone in a manner that is functionally equivalent to the ability of an individual who does not have hearing loss or a speech disability. Minnesota Relay must be in full compliance with the requirements and intent of Title IV of the Americans with Disabilities Act of 1990, 47 U.S.C. § 225, Federal Communications Commission regulations at 47 C.F.R. §§ 64.601 through 64.606, and Minnesota Statute §§ 237.50 through 237.56.

The TED Program provides specialized telecommunications equipment to enable persons who are deaf, hard of hearing, deaf-blind, speech disabled, or physically disabled to access telecommunications services. Program participants must meet eligibility requirements.

There have been significant changes and improvements to Minnesota Relay since its early years of operation. In 1995, the Minnesota Legislature eliminated the TACIP Board and transferred the responsibility for Minnesota Relay to the Department of Public Service[1]. The Department of Human Services (DHS), through an interagency agreement with the Department of Commerce (Commerce), operates the TED Program (Minnesota Statute § 237.51, Subd. 1).

In 1996, after careful consideration of the needs of Minnesota Relay users, TACIP determined that it was in the best interest of relay users, telephone ratepayers, and the legislature to relieve the state of the burden of owning and maintaining TRS equipment. It was apparent that the Minnesota Relay facility and its equipment had become severely outdated and beyond the point of overhaul. TACIP had two options: spend millions of dollars for the purchase of new equipment, or contract with a TRS vendor that would furnish continually upgraded equipment and software as well as specially trained call center staff. It was decided that the best way to provide comprehensive and cost effective relay services in Minnesota was to contract with a highly qualified TRS vendor.

On July 1, 1996, TACIP contracted with Communication Service for the Deaf (CSD) and Sprint Communications Company, L.P. (Sprint) for TRS. CSD's contract was for the provision of management, human resources, and outreach components for Minnesota Relay. Sprint's contract was for the provision of the call center facility, equipment and maintenance, and access to Sprint's fiber optic telecommunications network. Initially, Minnesota Relay traffic

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[1]The Departments of Public Service and Commerce merged on September 15, 1999.

was forwarded to relay centers operated jointly by CSD/Sprint. The Minnesota Relay center, located in Moorhead, began processing calls on December 16, 1996.

Effective August 1, 2002, the name of the Telecommunications Access for Communication Impaired Persons program changed to Telecommunications Access Minnesota (TAM). Commerce sought the name change at the request of consumers, who objected to the inclusion of the word "impaired" in the program name.

In 2005, the Minnesota Legislature passed legislation that created two new state programs, Accessible News for the Blind and Rural Real-time Captioning, that are funded via the TAM surcharge.

The Accessible News for the Blind program provides accessible electronic information (news and other timely information) for people who are blind or have other disabilities that make it difficult for them to read print. This program is administered by the commissioner of the Department of Employment and Economic Development (DEED), and has a maximum annual budget of $100,000.

The Rural Real-time Captioning program provides real-time captioning of certain local television news programs for people who are deaf, hard of hearing, or deaf-blind. This program is administered by the commissioner of the Department of Human Services (DHS), and has a maximum annual budget of $300,000.

On October 17, 2005, TAM issued a Request for Proposal for the provision of TRS and associated outreach. The TRS contract was awarded to Communication Service for the Deaf (CSD) – with Sprint as a subcontractor – and was effective from July 1, 2006, through June 30, 2011, with the option to renew up to an additional 60 months. TAM extended the basic relay and captioned telephone relay services components of the TRS contract with CSD through June 30, 2014. The Minnesota Relay outreach component was not included in the contract extension.

In 2006, the Minnesota Legislature passed legislation that appropriated $200,000 annually from the TAM fund to the Commission of Deaf, DeafBlind and Hard of Hearing Minnesotans[2] (MNCDHH) for operational expenses. MNCDHH is a governor appointed commission that advocates for equality of opportunity for Minnesotans who are deaf, deafblind, and hard of hearing. In 2007, the Minnesota Legislature passed legislation appropriating an additional $100,000 annually from the TAM fund to MNCDHH, for a total direct appropriation of $300,000 annually.

In 2008, the Minnesota Legislature passed legislation allowing for two direct appropriations from the TAM fund in FY 2009: $85,000 for a State Video Franchising study and $175,000 for a Broadband Mapping project.

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[2] Effective August 1, 2008, the Minnesota Legislature passed legislation to change the name of the Minnesota Commission Serving Deaf and Hard-of-Hearing People to the Commission of Deaf, DeafBlind and Hard of Hearing Minnesotans. The commission uses the initialism MNCDHH.

In 2009, the Minnesota Legislature passed legislation allowing for three one-time direct appropriations from the TAM fund in FYs 2010 and 2011. MN.IT Services (formerly the Office of Enterprise Technology) was appropriated $100,000 each year for technology accessibility and usability.   The Legislative Coordinating Commission (LCC) was appropriated $100,000 each year for captioning of live streaming of legislative sessions. MNCDHH was appropriated $100,000 each year for American Sign Language website content.

In 2010, the Minnesota Legislature approved transfers of $246,000 in FY 2010, and $270,000 in FY 2011, from the TAM fund to the general fund.

In 2011, the legislature again passed legislation allowing for one-time direct appropriations from the TAM fund to MN.IT, LLC, and MNCDHH in FYs 2012 and 2013. MN.IT received $230,000 each year for coordinating technology accessibility and usability. LCC received $150,000 each year in to provide captioning of live streaming of legislative activity on the LCC's website and for a consolidated access fund for other state agencies. MNCDHH received $20,000 each year in to provide information in American Sign Language on their website and to provide technical assistance to state agencies.

In 2011, the Minnesota Legislature approved a transfer of $1,100,000 from the TAM fund to the general fund; the transfer was processed in FY 2012.

In July 2011, Commerce – TAM began contracting with DHS – TED Program for the provision of Minnesota Relay Outreach services. With this transition, outreach is provided from five regional Deaf and Hard of Hearing Services office (in the past, Minnesota Relay outreach was provided from one office located in St. Paul), and TAM has greater oversight of staff and program objectives. In addition, the contract saves the TAM fund over $250,000 annually.

In 2013, the legislature passed legislation modifying the direct appropriations from the TAM fund to MN.IT, LCC, and MNCDHH. In FY 2014, MN.IT's funding increased to $290,000 and became a permanent annual allocation, and the LCC's $150,000 appropriation became a permanent annual allocation. MNCDHH's appropriation increased to $500,000 in FY 2014 and to $800,000 in FY 2015; the FY 2015 funding level became a permanent annual allocation.

Also in 2013, the legislature passed legislation that imposes a TAM fee on each retail transaction for prepaid wireless telecommunications services, in the amount of the monthly charge provided for in Minnesota Statute § 237.52, Subd. 2. The prepaid wireless fee became effective on January 1, 2014.

On March 5, 2014, TAM issued a Request for Proposal for the provision of TRS. The TRS contract was awarded to Sprint Communications Company L.P. and is effective from July 1, 2014, through June 30, 2019.

TELECOMMUNICATIONS ACCESS MINNESOTA (TAM)

TAM Administration

The Department of Commerce – Telecommunications Access Minnesota (Commerce – TAM) administers the TAM fund and manages vendor contracts and interagency agreements. Minnesota Relay services are provided to the state under contract with Sprint Communications Company L.P. The Telephone Equipment Distribution (TED) Program, Minnesota Relay Outreach services, and the Rural Real-time Captioning program are provided by interagency agreements with the Department of Human Services. The Accessible News for the Blind program is provided by an interagency agreement with the Department of Employment and Economic Development.

TAM Funding

TAM Funding Sources

- Monthly surcharge on all wired and wireless telephone access lines in the state of Minnesota (including cable and fixed/static VoIP).
- Fee on each Minnesota retail transaction for prepaid wireless telecommunications services.

TAM surcharge revenue is deposited into a dedicated account. The monthly surcharge is capped at $0.20 per access line or retail transaction.

Current Surcharge

In May 2015, the PUC approved TAM's fiscal year 2016 Budget and Surcharge Recommendations. The PUC accepted TAM's recommendation to decrease the surcharge from $0.08 to $0.07, which will support all TAM fund programs and will maintain an adequate reserve for operating expenses. The $0.07 surcharge became effective January 1, 2016.

TRS Jurisdictional Separation of Costs

Minnesota's Telecommunications Relay Services (TRS) program observes all jurisdictional separation of costs as required by 47 C.F.R. § 64.604(c)(5), Section 410 of the Communications Act of 1934, Minnesota Statute § 237.10, and Minnesota Rules, Chapter 7810.6400. All Minnesota Relay intrastate and interstate minutes are reported separately and distinctly to the state and are included in monthly invoices from our TRS vendor.

Minnesota Relay local and intrastate minutes of service (including 49 percent of toll free and 900 minutes, and 89 percent of two-line CapTel minutes) are reimbursed through the

TAM fund. Minnesota Relay interstate and international minutes of service (including 51 percent of toll free and 900 minutes, and 11 percent of two-line CapTel minutes) are reimbursed by the Interstate TRS Fund.[3]

Programs Funded

- TAM Administrative Expenses
- Minnesota Relay Services
- Minnesota Relay Outreach
- TED Program
- Accessible News for the Blind
- Rural Real-time Captioning
- Commission of Deaf, DeafBlind and Hard of Hearing Minnesotans
- MN.IT (for coordinating technology accessibility and usability)
- Legislative Coordinating Commission (for captioning of live streaming of legislative activity and for a consolidated access fund for other state agencies)

Population Served

The Minnesota Relay and TED Program serve Minnesotans who have a hearing, speech, or physical disability that make it difficult or impossible to use standard telecommunications services and equipment, and serves the people who want to call these individuals.

Role of the Public Utilities Commission

In accordance with Minnesota Statute § 237.55, "The commissioner of commerce must prepare a report for presentation to the Public Utilities Commission by January 31 of each year. Each report must review the accessibility of telecommunications services to persons who have communication disabilities, describe services provided, account for annual revenues and expenditures for each aspect of the fund to date, and include predicted program future operation."

Commerce must also submit an annual budget and surcharge recommendation to the Public Utilities Commission (PUC) for approval. The PUC reviews the recommendation for reasonableness, may modify the budget to the extent it is determined unreasonable, and sets the annual TAM surcharge amount (Minnesota Statute §237.52, Subd. 2).

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[3] Interstate TRS is funded by contributions from every carrier providing interstate telecommunications services (including interconnected and non-interconnected VoIP service providers) based on interstate end-user revenues. The fund administrator is currently Rolka Loube Saltzer Associates, LLC.

TAM Program Audit

On June 4, 2013, in Docket No. P-999/M-13-138, the PUC issued an order that, among other things, asked TAM to develop a plan and budget for concluding an audit of the programs funded through the TAM fund.

On January 28, 2014, Commerce filed an audit proposal for PUC approval. On June 20, 2014, the PUC found the audit proposal to be well designed and directed Commerce to implement the proposal. The Commission requested that Commerce seek proposals with high, medium, and low levels of scrutiny, critical analysis, and verification of operations data (and the cost associated with each level). The PUC also directed Commerce to submit an audit budget to the Commission prior to awarding the contract.

On October 15, 2014, Commerce provided the PUC with a draft of the audit Request for Proposals (RFP) for approval. On October 29, 2014, the PUC accepted Commerce's draft RFP, with one small modification. On December 1, 2014, Commerce released an RFP for an audit of TAM programs. A selection committee evaluated the proposals and on Feb. 25, 2015, TAM submitted a proposed audit budget to the PUC. The proposed budget included expenditures of approximately $100,000 for a high-level audit, $80,000 for a medium-level audit, and $60,000 for a low-level audit. On April 17, 2015, the PUC approved an audit budget of $100,000 for a high-level audit.

In February 2015, as required by Minnesota Statutes § 3.972, Subd. 3, Commerce provided the Office of the Legislative Auditor with a draft of the TAM audit contract for their review. The Office of the Legislative Auditor reviewed the contract and did not take exception to Commerce procuring the audit services.

Commerce awarded the TAM audit contract to Examination Resources, LLC, and the audit commenced in May 2015.

Commerce received the final TAM audit report from Examination Resources on December 17, 2015, at which time Commerce filed the audit report with the PUC.

Minnesota Relay Progress

Relay Center

- Enhancements were made to Sprint's TRS software "help panel". The online help panel enables the relay communications assistants to access procedural help screens and reference resources during or between processing calls. This panel was expanded to include a drug, condition, and usage list of words, which serves as an online resource to support medical-related spelling and pronunciation of uncommon words.

- The call-handling desktop software used by the communications assistants was updated to expand the auto-correct and auto-expand word library from 594 words to over 2,600 words.

- Additional features were added to the Customer Preference form that can be completed by relay users.

  Relay users are now able to store 100 frequently dialed telephone numbers in their Customer Preference database.

  Relay users who are deaf-blind can now personalize their customer preferences to request that the communications assistant confirm their calling-handling preferences prior to the start of the outbound call. They can also indicate the type of assistive equipment they use; this information can improve the relay call experience and assist with troubleshooting, if necessary.

Communications Assistants

Relay communications assistants received ongoing skill training and desktop refresher training.

Internal quality testing was performed monthly to ensure that the relay communications assistants were meeting mandatory minimum standards (such as typing speed and accuracy), and were following proper call handling procedures.

CapTel

A software update was released to CapTel 2400i devices that allow the CapTel phone to act as a speakerphone with captions.

Videos

TAM worked with our TRS provider to create informational videos for five forms of Minnesota Relay services. The videos are available on the Minnesota Relay website, and are also used for presentations. The five videos include:

- TTY Relay
- CapTel Relay
- Hearing Carry Over Relay
- Voice Carry Over Relay
- Speech-to-Speech Relay

Anticipated TRS Enhancements in 2016

A Braille CapTel service is currently in beta testing. Individuals with hearing and vision loss who read Braille and are able to voice for themselves will be able to receive word-for-word captions of what the other party on the call is saying on a dynamic Braille display.

CapTel equipment is in development that would allow a user with low vision to be able to view captions of what the other party on the call is saying on their HDMI-enabled TV Screen. Captions can be as large as the TV screen allows.

Minnesota Relay Services Provided

Minnesota Relay is a free service that provides telephone accessibility to persons who are deaf, deaf-blind, hard of hearing, or speech disabled. A specially trained communications assistant (CA) facilitates the telephone conversation between a person who has hearing loss or a speech disability and other individuals. Calls can be made to anywhere in the world (long-distance charges apply), 24 hours a day, 365 days a year, with no restrictions on the number, length, or type of calls. All calls are strictly confidential and records of conversations are not kept.

TAM and the TED Program aim to be proactive in monitoring trends and rapid advances in telecommunications technology. We strive to provide services and equipment that allow people with disabilities to independently access telecommunications services so that they can stay connected with family, friends, businesses, and services.

We also provide Minnesotans with education, training, and support regarding TRS and specialized telecommunications equipment.

Minnesota Relay Features

- 7-1-1: A nationwide abbreviated dialing code for accessing some types of relay services.

- 800/877/888 Numbers: Minnesota Relay users are able to reach regionally-directed and regionally-restricted 800, 877, and 888 toll-free numbers and business offices of local telephone companies that have special prefixes, all of which would normally be accessible to consumers in their calling area.

- 900 Service: allows Minnesota Relay users to access 900 number pay-per-call services.

- Answering Machine Retrieval: TTY users can request the relay Communications Assistant (CA) to retrieve messages from the user's voice answering machine or voice mail.

- ASCII Split Screen: allows high-speed ASCII computer users to view both sides of the relay call, at the same time, on a split window. Similar to voice-to-voice conversation, ASCII Split Screen provides the relay user and the other party the ability to interrupt when appropriate.

- CA Gender Request: The relay user can request the CA gender that they would prefer to handle their call (either on a call-by-call basis, or permanently through their Customer Preference/Profile). Every effort will be made by the relay service to fulfil this request.

- Call Release: allows the CA to sign-off or be "released" from the telephone line after the CA has set up a telephone call between the originating TTY caller and a called TTY party, such as when a TTY user must go through a TRS facility to contact another TTY user because the called TTY party must be reached through a voice-only interface, such as a switchboard.

- Caller ID: Calls placed through Minnesota Relay will provide the originating calling party number (ANI), or caller ID information, through the local exchange carrier for all local and most long distance calls. The relay provides the calling parties 10-digit telephone number to the called party (if not blocked by the calling party).

- CapTel® is an amplified telephone and relay captioning service that allows people who are hard of hearing to see captions of their telephone conversation on a bright, easy-to-read display window built into the CapTel phone, while also listening to what is being said using their residual hearing (much like TV captioning). The CapTel user speaks directly to the other person on the call, and the relay communications assistant transcribes everything the other person says into written text.

  - Two-Line CapTel: With two-line CapTel, the conversation is carried on one telephone line and the captions are provided on a second line. This gives two-line CapTel relay users the ability to caption any phone call – incoming or outgoing – at any point in the conversation. Two-line CapTel also supports enhancements that the user has purchased from their telephone service, including call waiting.

- Carrier of Choice (COC): allows a relay user to choose their preferred carrier for intrastate, interstate, and international calls. This requires the user's long distance phone carrier to enter into a billing and collection agreement with Sprint.

- Customer Preference Database: Offers relay users numerous ways to automatically expedite the initiation of custom calls. These pre-selected customer calling features include, but are not limited to, communication modes (TTY, voice, and ASCII), long distance carrier of choice, preferred billing method, frequently dialed numbers, emergency numbers, and customer notes for call processing.

- Deaf-Blind Relay: Individuals who are deaf and blind can use a special TTY equipped with a braille display or a large visual display.

- Deaf-Blind Transmission Speed: A modification of the default transmission speed for Telebraille users. Relay users who are deaf-blind can set their transmission speeds anywhere from 15 through 60 words-per-minute.

- Directory Assistance: A CA will relay directory assistance calls between a relay user and the Local Exchange Carrier directory assistance operator. Once the caller makes a request for directory assistance, the CA will contact a Local Exchange Carrier directory assistance operator. After obtaining the requested phone number, the caller may choose to place the call through the relay or dial it directly (i.e. TTY to TTY). Note: Directory Assistance is often subject to charges by the caller's local telephone service provider.

- Emergency Assistance: Although relay users are discouraged from placing 9-1-1 calls through the relay, calls to 9-1-1 will be placed at the caller's request. Through the provider's E911 database, the CA uses a "hot button" to automatically place a call to the most appropriate Public Safety Answering Point.

- Enhanced Turbo Code (E-Turbo™): allows a TTY user to automatically submit dialing and call set-up instructions when they call into Minnesota Relay. This significantly reduces the amount of time necessary for the CA to set-up and process the outbound call. The result is that the TTY user is connected to their desired party at a speed that is more functionally equivalent to that of a non-relay call.

- Error Correction: This feature automatically corrects many typographical errors and spells out non-TTY abbreviations that may be used by the CA in voice-to-text transliteration.

- Flexible Billing: allows Minnesota Relay users to complete long distance calls using pre-paid calling cards, carrier calling cards, third party billing, or by placing collect calls.

- Hearing Carry Over (HCO): allows a person who can hear but who has very limited or no speech capability to make and receive phone calls. The HCO user types his or her conversation for the CA to read to the other person, and listens directly to the other person's response.

  - Two-line HCO: is an enhanced form of Hearing Carry Over that offers more control and allows for interactive conversation without the use of "GA" (go ahead) instructions. The HCO user can respond in real time, and can even interrupt, rather than wait for the other party to say "GA."

- Intelligent Call Router: Technology that automatically and seamlessly routes relay calls to the first available CA in the network.

- International Calls: allows the relay user to place and receive calls to and from anywhere in the world (using English or Spanish languages only).

- Last Number Redial: allows the relay user to call the last person dialed through the relay without having to provide the telephone number to the CA.

- Recording Machine Capabilities: allows the CA to record and play back audio-text interaction messages to reduce numerous callbacks to convey entire messages to calling parties.

- Spanish Relay: the CA relays calls between a Spanish-speaking person with a hearing or speech disability and another Spanish-speaking person.

- Speech-to-Speech (STS): allows a person who has difficulty speaking or being understood on the phone to communicate using his or her own voice or a voice synthesizer. The CA revoices the words of the person with a speech disability so that they can be understood by the other person on call.

- Telecommunications Service Priority (TSP): On October 31, 2005, Sprint activated their call centers under the TSP program. If a national or regional emergency causes service to be disrupted and the Moorhead relay center cannot receive or place calls, Sprint's

participation in the TSP program means that Local Exchange Carriers will be required to restore service as rapidly as possible consistent with the priority status assigned to the Moorhead relay center.

- Three-Way Calling Feature: allows more than two parties to be on the telephone line at the same time with the CA.

- Transfer Gate Capabilities: allows the CA to transfer a caller to another form of relay service (i.e. CapTel, Speech-to-Speech, Spanish), to customer service, or to a relay center manager.

- Text telephone (TTY): allows a person who is deaf, hard of hearing, or who has a speech disability to use a TTY to communicate with the other person on the call. The CA reads the TTY user's words to the other person, and types the other person's words for the TTY user to read.

- Text Telephone (TTY) Operator Service: is available to complete a TTY to TTY call, obtain directory assistance information, or receive credit for erroneous billing.

- Turbo Code Capability: allows users to send information at the same speed it is typed, resulting in a more natural conversational flow and the ability to interrupt one another.

- Variable Time Stamp Macro: This macro enables the relay caller to know when their called party has disconnected from the call.

- Voice Carry Over (VCO): allows a person who can speak clearly but has hearing loss significant enough to prevent them from hearing and understanding conversations over the telephone. Using VCO relay and a specially designed telephone with a text display, the VCO user speaks directly to the other person on the call. The CA types what is spoken by the other person for the VCO user to read.

  ➢ Two-Line VCO: is an enhanced form of Voice Carry Over that offers more control and allows for interactive conversation without the use of "GA" (go ahead) instructions. The user can respond in real time, and even interrupt, rather than wait for the other party to say "GA."

  ➢ VCO Gated Calling: Minnesota Relay has dedicated VCO and two-line VCO toll-free phone numbers, which provide significant improvements in service by directing VCO users to specifically trained VCO and two-line VCO CAs.

  ➢ VCO-With-Privacy-and-No-GA: allows VCO users to use the standard VCO feature without needing to say "Go ahead" or "GA". Additionally, the CA does not listen to the VCO user's spoken words.

- Voice Call Progression: allows voice or HCO callers to listen during call set-up (i.e. ringing or busy).

Call Volumes

The following Minnesota Relay call charts can be found in Appendix A:
- 2015 Minnesota Relay Conversation Minutes by Type
- 2006 – 2015 Minnesota Relay Call Volume
- Traditional TRS Call Volumes
- Speech-to-Speech Call Volumes
- CapTel Call Volumes

In 2015, Minnesota Relay averaged 38,886 calls per month: 11,726 traditional[4] relay calls, 955 Speech-to-Speech calls, and 26,205 CapTel calls. Overall, Minnesota Relay experienced the following changes in call volume from 2014 to 2015:
- 15% decrease in traditional relay calls
- 4% increase in Speech-to-Speech relay calls
- 17% decrease in CapTel relay calls

Telecommunications Relay Services are currently split into two categories:

- Those administered and funded on a state level, which include local and intrastate minutes of service for traditional relay, Speech-to-Speech relay, and Captioned Telephone relay services.

- Those under the Federal Communications Commission's jurisdiction and paid for by an Interstate TRS Fund, which include interstate and international minutes of service for traditional relay, Speech-to-Speech relay, and Captioned Telephone relay services.

  It also includes *all minutes* for Internet-based relay services, which are comprised of Video Relay Service (VRS), Internet Protocol (IP) Relay, and Internet Protocol Captioned Telephone Relay Service (IP CTS). The FCC authorized the recovery of the cost of interstate and intrastate minute of use for Internet-based relay services from the federal Interstate TRS Fund, but stated that the special funding arrangement is temporary.

The migration to Internet-based relay services continues to grow as more and more consumers gain access to high-speed Internet. Internet-based relay services tend to be easier to use and have more features. In addition, there are free relay applications that can be downloaded to wireless devices such as smartphones and tablets, allowing the relay user to make calls on the go. There are currently no Internet-based Speech-to-Speech relay services available, which is why we are still seeing an increase in usage on the state funded level.

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[4] Traditional TRS includes TTY, VCO, and HCO relay services.

To provide perspective on the use of relay services outside state jurisdiction, below is a chart indicating 2015-2016 projections for relay services reimbursed through the federal Interstate TRS Fund[5]:

Interstate TRS Fund Projections for 2015-2016	
Type	Billable Conversation Minutes
Traditional TRS	2,071,882
Speech to Speech	120,000
Caption Telephone	6,988,592
IP Caption Telephone	193,565,772
IP Relay	6,640,484
VRS	133,739,269
Total:	343,125,999

The projected cost for these services for the fund year is $970 million dollars. If the FCC were to impose a jurisdictional separation of costs for Internet-based relay services (that is, each state would pay for the local and intrastate Internet-based relay calls of their residents) state TRS funds would need significant increases to their funding.

Accessibility of Telecommunications Network – Minnesota Relay Services

Switching System Configuration

All Sprint Relay call centers use a digital switching system that is an integral part of the Relay platform. The system offers availability in excess of 99.99%, redundancy of all major system components (including the Central Processing Unit) and catastrophic fault recovery that provides for call continuity in the event of a switch failure. Sprint's Intelligent Call Manager ensures that required levels of service are maintained in the event of a processor failure. If a center shuts down for any reason, all calls are automatically re-routed around the affected center to the remaining operating centers in the Sprint Network.

Sprint's switch is fully redundant to provide a non-stop environment for the relay call center. The switch is designed to allow maintenance without interrupting service and incorporates a back-up processor, memory and disk subsystems. All Sprint Relay call centers also include fully redundant power systems incorporating a combination of battery and generator Uninterrupted Power Supply systems to condition and maintain electrical power in case of a power outage from the local electrical provider.

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[5] *See* Rolka Loube, Interstate Telecommunications Relay Services Fund Payment Formula and Fund Size Estimate, CG Docket Nos. 03-123, 10-51 (filed April 24, 2015) (*2015 TRS Rate Filing*); Supplemental Filing, CG Docket Nos. 03-123, 10-51 (filed May 1, 2015) (*2015 TRS Rate Filing Supplement*).

If a failure of the switch or supporting systems occurs, the Sprint TRS dynamic call routing will, within seconds of detecting the outage, route all new Minnesota Relay calls to another call center until the failing system is repaired and the TRS call center is returned to service. Sprint's call center and Relay system design permits the maximum availability with minimal loss of service to our users.

All of the system preventive maintenance functions can be performed on-line, with no effect on call processing. In addition, on-line and off-line diagnostic routines will identify system faults or failures at the individual board level. Diagnostic procedures are continually processed by the switching system software to detect defective components before they are used. Manual on-line diagnostics can be launched at any time from the maintenance and administrative terminal located within the unit; without affecting call processing, calls in progress or calls waiting in queue. The maintenance and administrative terminal includes a keyboard, screen and printer capabilities.

Each Data Center and Sprint Relay call center maintains a complete system's spare inventory to meet any malfunction or emergency situation. In addition to spares for switch components, spare units include Communications Assistant position units, computer desktop spares, and Local Area Network and modem equipment.

Uninterruptible Power System

Sprint utilizes both an Uninterrupted Power Supply (UPS) and backup power generator to ensure that all Data Centers and Sprint Relay Centers have uninterrupted power even in the event of a power outage. UPS is used only long enough for the backup power generator to come on line – a matter of minutes. Backup power generators are supplied with sufficient fuel to maintain operations for at least twenty-four hours. Generators can stay in service for longer periods of time, as fuel availability permits.

In the event of a power outage, the UPS and backup power generator ensures seamless power transition until normal power is restored. While this transition is in progress, power to all basic equipment and facilities essential to the center's operation is maintained. This includes:

- Switch system and peripherals
- Switch room environmentals
- Communication Assistant positions (consoles/terminals and emergency lights)
- Emergency lights (self-contained batteries)
- System alarms
- Call Detail Record recording

As a safety precaution (in the event of a fire during a power failure), the fire suppression system is not electric powered. Once the back-up generator is on line, stable power is established and maintained to all TRS system equipment and facility environmental control units until commercial power is restored.

Transmission Circuits

Sprint is a certified interexchange carrier in all 50 states. Using Sprint's nationwide all digital fiber-optic network, transmission circuits meet, if not exceed, Federal Communications Commission and TAM intraexchange performance standards and ANSI T1.506-1990 Network Performance – Transmission Specifications for Switched Exchange Access Network standards for circuit loss and noise.

Sprint's Synchronous Optical Network (SONET), using four-fiber bi-directional line switched ring capability, allows automatic switching to alternate paths to provide for traffic rerouting in the event of a route failure. The SONET fiber optic backbone topology is currently designed with more than 100 overlapping rings to ensure sufficient alternate paths for total network survivability. As such, Minnesota Relay is linked to a coast-to-coast telecommunications route, which ensures voice, data, and video services without interrupting the call. This guarantees that Minnesota Relay calls are safeguarded by automatically rerouting service around disruptions in approximately 60 milliseconds.

Alternate Facilities

Sprint's network of TRS call centers use three centralized Avaya Automatic Call Distributors. If the TRS platform experiences an outage with one of the Avaya Automatic Call Distributors, the Peripheral Gateways connected to the Avaya experiencing the issue would go offline, notifying Intelligent Call Management to stop routing traffic to that Avaya Automatic Call Distributor. The traffic routed to that Avaya Automatic Call Distributor would be routed to all other functioning Avaya Automatic Call Distributors.

Simultaneously, the Traffic Management Control Center contacts all other TRS centers notifying them of technical issues and requests additional staffing at all other functioning centers. Any center employees who are conducting ongoing training or other meetings will be requested to return to the call center floor to assist in handling calls. CAs may also be offered overtime.

Sprint TRS services are supported by six geographically dispersed centers including the Moorhead center. The TRS centers are managed by a 24/7 control center that dynamically monitors and manages the centers for all operational issues. If an event occurs that affects a center's ability to handle TRS calls, the Control Center re-routes incoming traffic to other TRS centers. All re-routing is transparent to customers.

Likewise, Sprint offers a redundant CapTel solution with three CapTel-dedicated call centers and two co-located CapTel centers with Business Continuity programs to ensure that any issues are resolved quickly with minimal customer impact.

7-1-1 Dialing Access

On August 9, 2000, the FCC released a *Second Report and Order* concerning nationwide 7-1-1 dialing access to TRS[6]. The Order required all common carriers, wireless providers, payphone vendors, and Private Branch Exchange (PBX) vendors to provide 7-1-1 dialing access to relay services on or before October 1, 2001.

In 2015, an average of 45 percent of Minnesota Relay calls were placed using this dialing shortcut. Relay users are also able to access Minnesota Relay by dialing the 10 digit toll-free access numbers.

Handling of Emergency Calls

Minnesota Relay encourages users to dial 9-1-1 or other existing emergency numbers directly in emergency situations as using relay may result in a delay in getting their call through. However, some consumers are more comfortable using relay to access emergency services.

Minnesota Relay automatically and immediately transfers emergency relay calls to the appropriate Public Service Answering Point (PSAP) that the caller would have reached by dialing 9-1-1 directly, or to a PSAP that is capable of dispatching emergency services in an expeditious manner. An emergency call is considered to be one in which the relay user indicates the need for police, fire department, paramedics, or ambulance. Minnesota Relay utilizes a standard E911 database (provided by Bandwidth.com) that serves all of the United States.

Speed of Answer

Minnesota Relay meets the FCC mandatory minimum standard for TRS speed of answer (FCC 47 C.F.R. § 64.604), which states "TRS facilities shall, except during network failure, answer 85% of all calls within 10 seconds by any method which results in the caller's call immediately being placed, not put in a queue or on hold." Minnesota Relay's average speed of answer and service levels are:

	Service Level	Speed of Answer
Traditional TRS	1.6	95%
Speech-to-Speech	5.3	90%
CapTel	0.6	99%

Minnesota Relay is equipped with sufficient facilities to provide a Grade of Service (GOS) of P.01 or better for calls entering the relay call center(s) switch equipment.

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[6] In the Matter of the Use of N11 Codes and Other Abbreviated Dialing Arrangements, (Second Report and Order), CC Docket No. 92-105, FCC 00-257, 15 FCC Rcd 15188, released August 9, 2000.

Equal Access to Interexchange Carriers

47 C.F.R. § 64.604 (b)(3) requires that "TRS users shall have access to their chosen interexchange carrier through the TRS, and to all other operator services, to the same extent that such access is provided to voice users."

Minnesota Relay users are able to have their intrastate, interstate and international calls carried by any interexchange carrier who has completed the steps necessary to be available as a Minnesota TRS Carrier of Choice (COC). When a caller indicates their COC preference, the CA will verify that the requested carrier is available as a COC in Minnesota; if they are, the call will be routed accordingly. Callers are able to use any billing method made available by the requested carrier including collect, third party, prepaid, and calling cards.

If a Minnesota Relay caller does not indicate a COC preference to the CA, either at the time of the relay call or via their Customer Preferences, or if the user's preferred carrier is not available as a COC in Minnesota, the long distance relay call will be carried and billed by Sprint.

When a relay user requests a long distance carrier that is not a COC participant in Minnesota, Sprint notifies the TAM administrator. The TAM administrator sends the non-participating long distance carrier a letter notifying the company of its obligation to provide access to TRS users, as well as instructions on how to become a COC in Minnesota.

Please see Appendix B for carriers currently available as a COC for Minnesota Relay.

Rates

Minnesota Relay users are charged no more for services than those charges paid by standard "voice" telephone users; relay users placing long distance calls are only billed for conversation time.

Relay users who select a preferred COC are rated and invoiced by their selected interstate carrier. Minnesota Relay users who do not select a preferred COC will have their long distance relay calls rated and invoiced by Sprint.

Sprint offers the following long distance discounts to Minnesota Relay users:
- 75% discount off of MTS standard intrastate toll rates
- 50% discount off of MTS standard interstate toll rates

Consumer Complaints

In 2015, Minnesota Relay received complaints on 0.0007 percent of relay calls; 466,626 calls were relayed and eight complaints were filed.

Minnesota Relay users have many options for filing a complaint or commendation. The CA has the capability to transfer the caller directly to Sprint's or CapTel's 24-hour Customer Service departments, or the relay user may request to speak to a relay supervisor during or

immediately after a call. Relay users may also file a complaint with the TAM Administrator, Minnesota Relay outreach staff, or the Federal Communications Commission.

All complaints and commendations are recorded electronically by Sprint on a Customer Contact form. Each form includes the date the complaint was filed, an explanation of the complaint, the date the complaint was resolved, an explanation of the resolution, and any other pertinent information. Sprint provides copies of each Customer Contact form to the TAM administrator monthly. In the event that TAM and the relay provider fail to resolve a Minnesota Relay complaint within 180 days after the complaint was filed, the FCC exercises jurisdiction over the complaint. Failure to meet the deadlines for complaint resolution may adversely affect the continued certification of Minnesota Relay (C.F.R. § 64.606).

TAM submits an annual Complaint Log Summary to the FCC in accordance with 47 C.F.R. § 64.604 (c)(1).

Outreach

Minnesota Relay Outreach

Minnesota Relay outreach is provided under an interagency agreement with the Department of Human Services – TED Program. Outreach staff is responsible for providing a comprehensive statewide outreach program to educate people about Minnesota Relay services. Outreach personnel distribute informational pamphlets, train consumers and businesses, make presentations, staff exhibitions, and perform other similar forms of consumer contacts. Outreach program staff and the TAM administrator serve as the point of contact for Minnesota consumers who have questions, concerns, complaints, commendations, etc. Outreach efforts are tailored to effectively target appropriate demographics, including consumers who are deaf, deaf-blind, hard of hearing, late deafened, speech disabled, hearing consumers, and businesses.

Outreach activities primarily include the following:
- Staffing a booth at exhibitions, seminars, and fairs.
- Presenting at senior centers, health care facilities, and social services agencies.
- Providing brochures and instruction sheets.

In 2015, staff performed 129 Minnesota Relay outreach activities reaching 2,890 Minnesotans. Reports containing Minnesota Relay outreach efforts are compiled monthly and sent to the TAM administrator. A summary of 2015 outreach activities is provided in Appendix C.

DHHSD Regional Advisory Committee Meetings

The Department of Human Services – Deaf and Hard of Hearing Services Division has established six advisory committees throughout Minnesota. Each advisory committee meets quarterly and serves as a venue to provide information to, and gather information from, the community. Advisory committee meeting minutes are provided to the TAM administrator

and TED Program administrator so that issues, questions and concerns regarding Minnesota Relay and the TED Program may be addressed.

The TAM administrator attends the Metro advisory committee meetings, and a Minnesota Relay Outreach/TED Program staff person attends one meeting per region, per year.

Telephone Equipment Distribution Program

The Telephone Equipment Distribution Program (TED Program) is responsible for distributing specialized telecommunications devices to income eligible Minnesotans, informing the public of services available through the program, and providing training for the use of distributed equipment.

The TED Program is administered through an interagency agreement between DHS – Deaf and Hard of Hearing Services Division (DHHSD) and Commerce – TAM. DHHSD has six regional offices around the state staffed with professionals experienced in working with people who are deaf, hard of hearing, deaf-blind, speech disabled, or physically disabled. TED Program services are provided through five of the DHHSD regional offices: Moorhead, Duluth, St. Cloud, St. Paul, and Mankato.

Authority to Provide Equipment

Minnesota Statute § 237.51, Subd. 5(a)(3) provides DHS with the authority to establish specifications for telecommunications devices to be provided under section 237.53, Subd. 3.

The types of equipment distributed include:

- Amplified Telephones (both hearing and voice)
- Bluetooth Cordless Amplified Phones
- Captioned Telephones
- Remote Control Speaker Phones
- Amplified Cell Phones
- Basic Smartphone
- Wireless accessories (Bluetooth neckloop, cell phone amplifier, and visual signaler)
- Ring Signaling Devices (auditory, visual, and tactile)
- Text Telephones (TTYs)
- Braille Phones
- Hearing Carry Over Phones
- Voice Carry Over Phones
- Special Needs Devices (for multiple disability)

Program Outreach

DHHSD is responsible for the promotion of TED Program services. TED Program specialists conducted much of their outreach by traveling to client homes and providing information and training "face-to-face." While websites, e-mails, and telephone calls can be an efficient, effective, and convenient way of providing information, TED Program specialists find that many consumers are more receptive if material is provided to them in person. Traveling to consumers to provide information, equipment, and training of the complexity of the device helps eliminate apprehension and mistrust, and results in a more personal, relaxed, and productive experience for the consumer.

A large portion of Minnesotans with hearing loss (33 percent) are 65 years of age or older. It is expected that by age 65, one out of three people will have a hearing loss, and the number is expected to rise as the Baby Boomer generation matures.

2015 outreach efforts included:
- 105 presentations statewide to groups of professionals and potential consumers.
- 40 booths at health fairs and senior expos to professionals and potential consumers.
- 28 cold calls to service providers.
- Attended and staffed a booth at the National Closing the Gap Conference.
- Radio ads through Minnesota News Network broadcasted throughout the state.
- Mass mailing (statewide) to churches and schools.
- Attended and staffed an exhibit at a fair for two administrations at the Department of Human Service.
- Attended the NW Social Services District Conference.
- Advertisements in Palmer Creations (40 county community newspapers), Seasons and Generations magazine, Sun Newspapers, Woman's Press, Senior Perspectives Magazine, Minnesota Health Care News, Minnesota Physician Publishing, Duluth News, and Times Media.
- Participated and staffed a booth at the ADA 25 year celebration.
- Advertisement in Tri-County Action Program (homeless project) in Central Minnesota.
- Attended and staffed a booth at the Wisdom Steps Native American statewide conference.
- Sponsor for the Hearing Loss Association of America Walk4Hearing.
- Attended and staffed a booth at the Minnesota Social Services Association conference.
- Advertisement in Minnesota Home Care Association directory.
- Attended and staffed a booth at the statewide Age Odyssey National Conference.

The chart below lists the number of *new* program participants served by the TED Program, as well as the number of devices distributed to *new* program participants for calendar years 1998-2015.

Year	Number of New Program Participants Served	Number of Devices Distributed to New Program Participants
1998	2,069	2,120
1999	2,141	2,340
2000	2,105	2,695
2001	1,882	2,431
2002	1,913	2,584
2003	1,906	2,337
2004	1,988	2,485
2005	1,872	2,405
2006	1,976	2,081
2007	1,771	2,073
2008	1,566	1,820
2009	1,638	2,728
2010	1,381	2,319
2011	1,317	2,529
2012	1,055	989
2013	935	1,027
2014	763	764
2015	642	764

The TED Program provides *repeat* service to equipment recipients who need further assistance after equipment is initially provided to them. Program participants often contact the TED Program to receive additional training, repair/replacement of equipment, or to exchange equipment because their communication needs have changed (e.g. a person's hearing deteriorates and the equipment they initially received no longer meets their needs).

This past year the TED Program served 642 new participants and 1,467 repeat participants. TED Program specialists also provided information and referrals to 240 consumers and agencies, for a total of 2,349 Minnesotans receiving service in 2015.

Statistical Information

A report of TED Program activities is submitted quarterly to the TAM administrator. The report documents outreach activity, the number of individuals served, and the types of equipment distributed. The charts provided in Appendix D demonstrate TED Program activities in 2015.

Population Served

The TED Program serves a wide range of individuals with a variety of communication needs. *Currently, the oldest TED Program participant is 108 years of age, and the youngest is age 4.* The average consumer served is female, 82 years old, and hard of hearing. In 2015, 70 percent of TED Program participants were female and 64 percent lived outside of the seven-county metropolitan area. Ninety-two percent of TED Program participants are hard of hearing, two percent are deaf, three percent are physically disabled, and three percent have other disabilities (deaf-blind or speech disabled).

In recent years, more clients with multiple disabilities have utilized the TED Program. In 2015, 27 percent of TED Program participants had two or more disabilities, such as a speech and physical disability or a loss of hearing and vision.

Future TED Program Operations

Service Delivery Changes
In 2015, the TED Program transitioned to a new service delivery system. The majority of equipment is now shipped from an equipment vendor (Teltex) directly to the client. Equipment that requires servicing is picked up from the client's home and delivered directly to the vendor. Most inventory is stored at the equipment vendor's warehouse. This process is more cost effective based on a cost analysis completed in 2015.

The Department of Human Services granted approval for the TED Program to change their policy for the return of equipment that is not working or no longer needed by the client. In the past, the TED Program picked up this equipment (via shipping) from the client's home. Often times, the cost to return the device to the TED Program (including shipping, staff time, and recycling expenses) was more than the depreciated value of the equipment. Now, if a device is more than three years old, the TED Program does not require that the equipment be returned.

TED Program Study
DHHSD received funds to conduct a study of the TED Program in 2015. The purpose of the study is to:
- Provide an assessment of the TED Program to determine if the program is meeting the current needs of consumers
- Solicit input from Minnesotans who are deaf, hard of hearing, deaf-blind, speech disabled, or physically disabled to determine their current and future needs
- Review federal law and how other states are utilizing the TAM Fund
- Recommend policy changes to the program.

A Request for Proposal was solicited and a vendor was awarded the contract in 2015. The study will be completed by April 30, 2016.

Wireless iPad/iPhone Pilot
In 2016, a pilot program will be established for the TED Program to distribute iPad and iPhones. The vendor will be responsible to handle troubleshooting questions, repairs, and some training. The purpose of the pilot is to determine how iPads and iPhones provide access to TED consumers through accessible applications. Each unit will have accessible applications installed per disability group. The length of the pilot will be six months. After surveying pilot participants, the TED Program will assess if iPads and iPhones should become a permanent part of the program.

TAM FUND BUDGET SUMMARY

	FY 2015 Actual	FY 2016 Budgeted
REVENUE		
Wireless and Wireline Surcharge Revenue Per Subscriber Line ($0.08 in FY 2015; $0.07 in FY 2016)	$ 5,179,761.42	$ 4,733,630.40
Prepaid Wireless Surcharge Revenue Per Subscriber Line ($0.08 in FY 2015; $0.07 in FY 2015)	$ 417,836.49	$ 451,732.83
TAM Fund Interest	$ 3,953.78	$ 2,700.00
Total TAM Fund Revenue	$ 5,601,551.69	$ 5,188,063.23

	FY 2015 Actual	FY 2016 Budgeted
EXPENDITURES		
TAM Program Administration	$ (180,202.47)	$ (158,200.00)
Sprint (TRS)	$ (2.147,565.74)	$ (2,334,716.02)
Minnesota Relay Outreach	$ (0.00)	$ (1.000.00)
DHS-TED Program	$ (1,360,470.08)	$ (1,494,950.00)
DHS-Rural Real-time Captioning	$ (238,396.98)	$ (276,154.00)
DEED-Accessible News for the Blind	$ (79,799.36)	$ (100,000.00)
Commission of Deaf, DeafBlind and Hard of Hearing Minnesotans	$ (800,000.00)	$ (800,000.00)
MN.IT Services	$ (290,000.00)	$ (290,000.00)
Legislative Coordinating Commission	$ (150,000.00)	$ (150,000.00)
Total TAM Fund Expenditures	$ (5,246,434.63)	$ (5,605,020.02)

	FY 2015 Actual	FY 2016 Budgeted
REVENUE VS. EXPENDITURES	$ 355,117.06	$ (416,956.80)

	FY 2015 Actual	FY 2016 Budgeted
STATEMENT OF TAM FUND BALANCE		
TAM Fund Balance at Beginning of Fiscal Year	$ 1,890,826.68	$ 1,874,350.31
TAM Fund Revenue & Interest	$ 5,601,551.69	$ 5,188,063.23
DHS-TED Program Cash Advance	$ (200,000.00)	$ (200,000.00)
DHS-Minnesota Relay Outreach Cash Advance	$ (500.00)	$ (500.00)
Return of DHS-TED Program Cash Advance	$ 200,000.00	$ 200,000.00
Return of DHS-Minnesota Relay Outreach Cash Advance	$ 500.00	$ 500.00
TAM Fund Expenditures	$ (5,246,434.63)	$ (5,605,020.02)
TAM Fund Balance at Close of Fiscal Year	$ 2,245,943.74	$ 1,457,393.52

APPENDICES

Appendix A
Minnesota Relay Call Charts

2015 Minnesota Relay Conversation Minutes by Type

CapTel
78%

Traditional TRS
21%
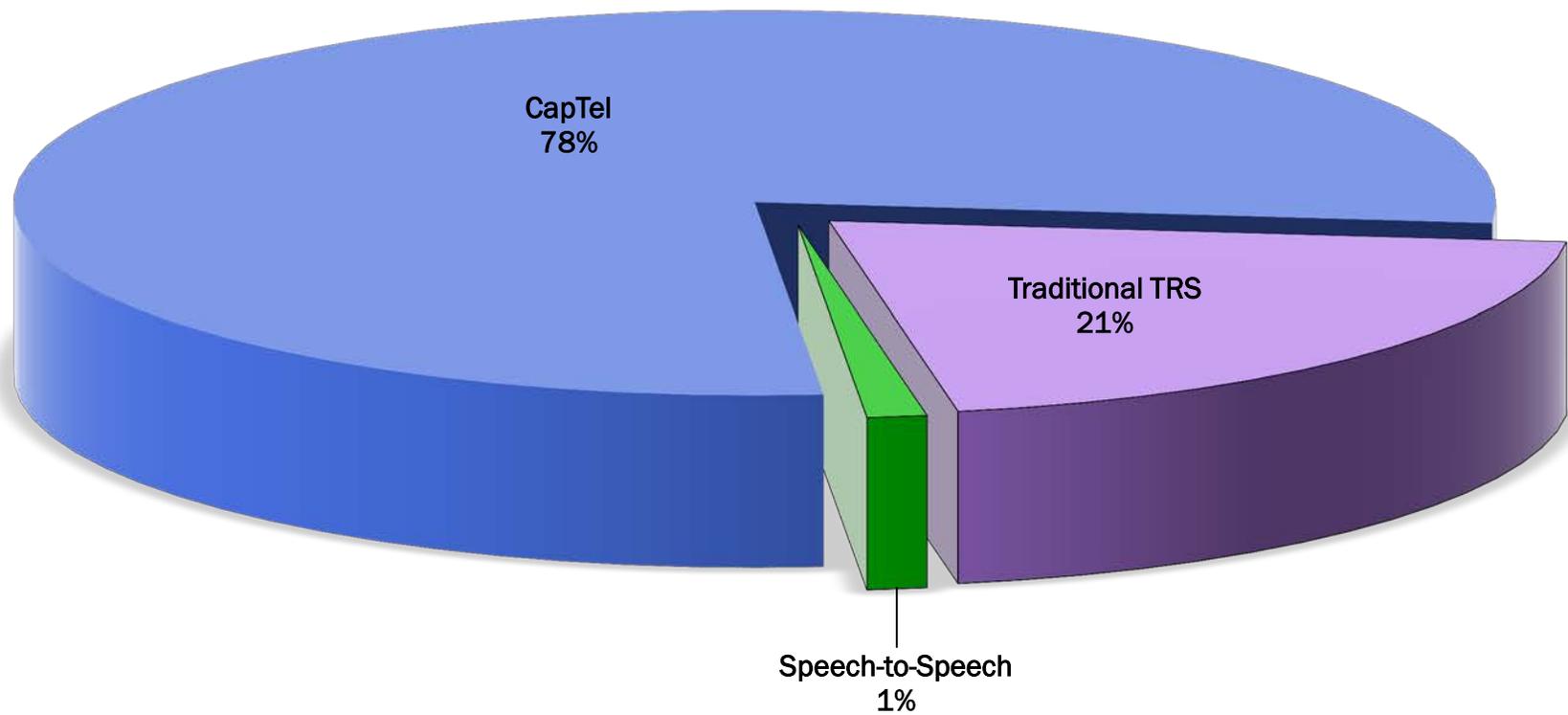
Speech-to-Speech
1%

2006 - 2015 Minnesota Relay Call Volume
(total number of traditional TRS, STS, and CapTel calls)
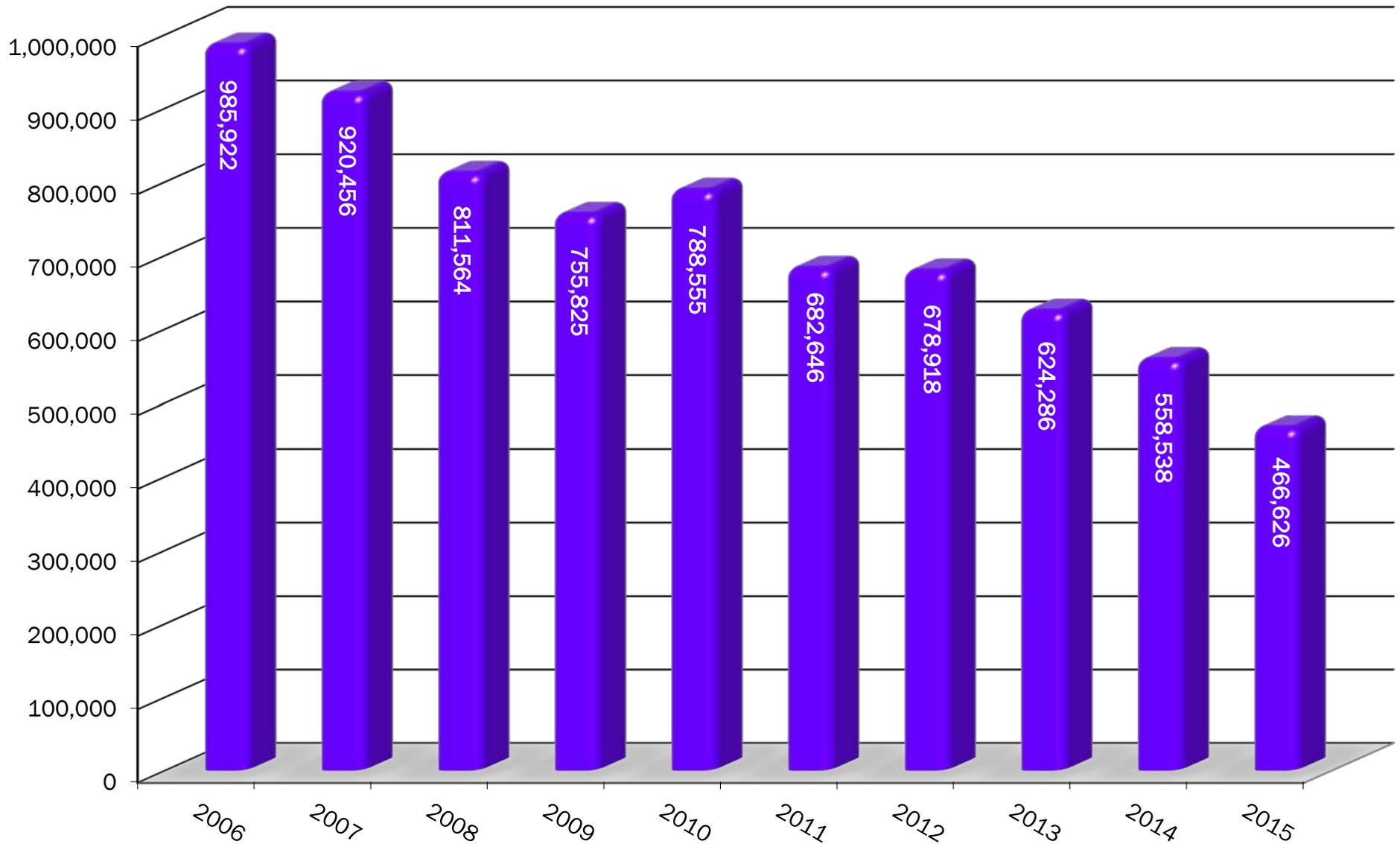
Year	Call Volume
2006	985,922
2007	920,456
2008	811,564
2009	755,825
2010	788,555
2011	682,646
2012	678,918
2013	624,286
2014	558,538
2015	466,626

Traditional TRS Call Volumes

Total Calls   Conversation Minutes

2013: 196,388 / 373,274
2014: 166,501 / 307,872
2015: 140,710 / 247,817
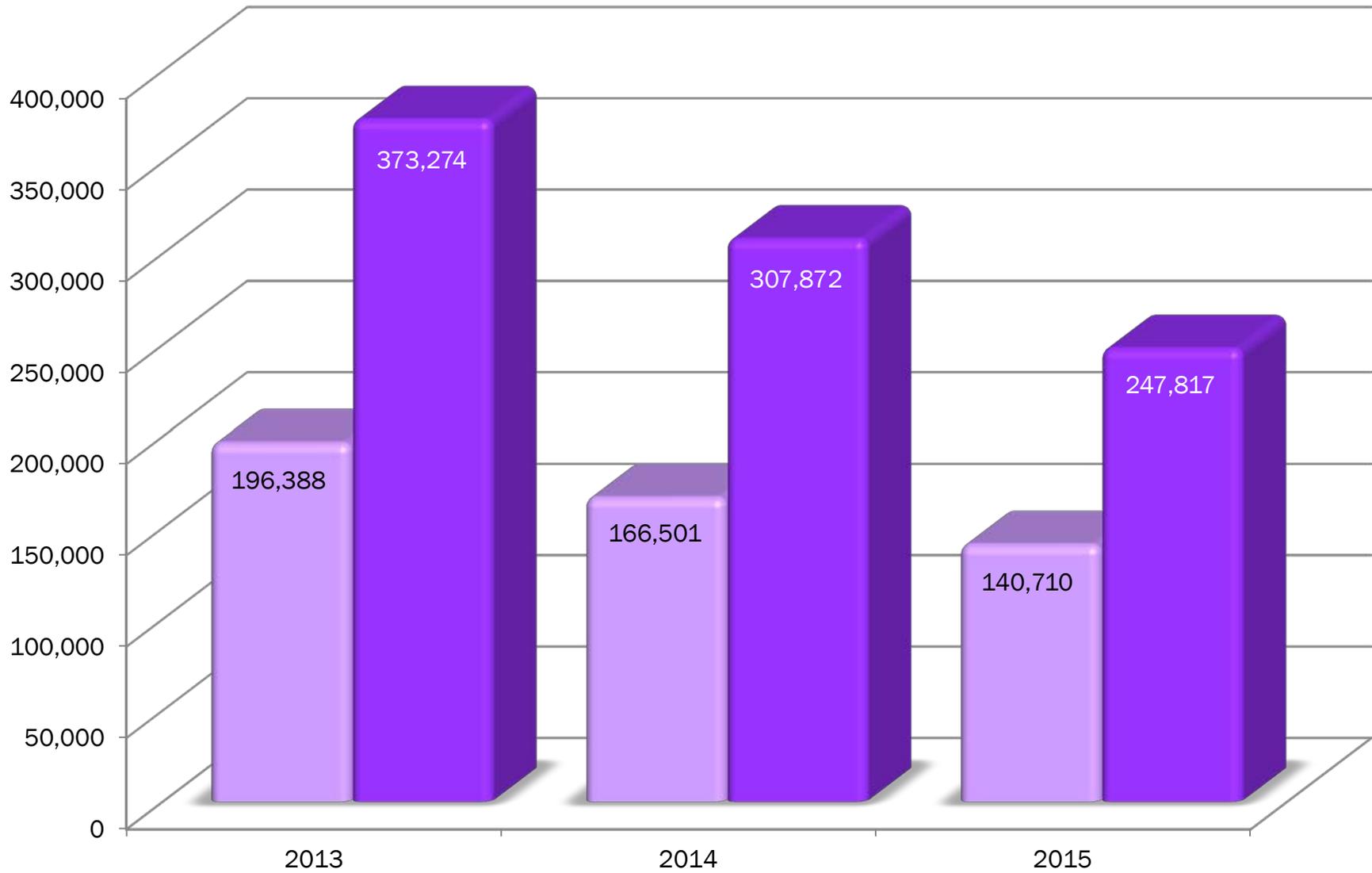
Speech-to-Speech Call Volumes

■ Total Calls ■ Conversation Minutes

CapTel Call Volumes

■ Total Calls ■ Conversation Minutes

	2013	2014	2015
Total Calls	416,961	381,006	314,460
Conversation Minutes	1,175,626	1,138,839	946,380
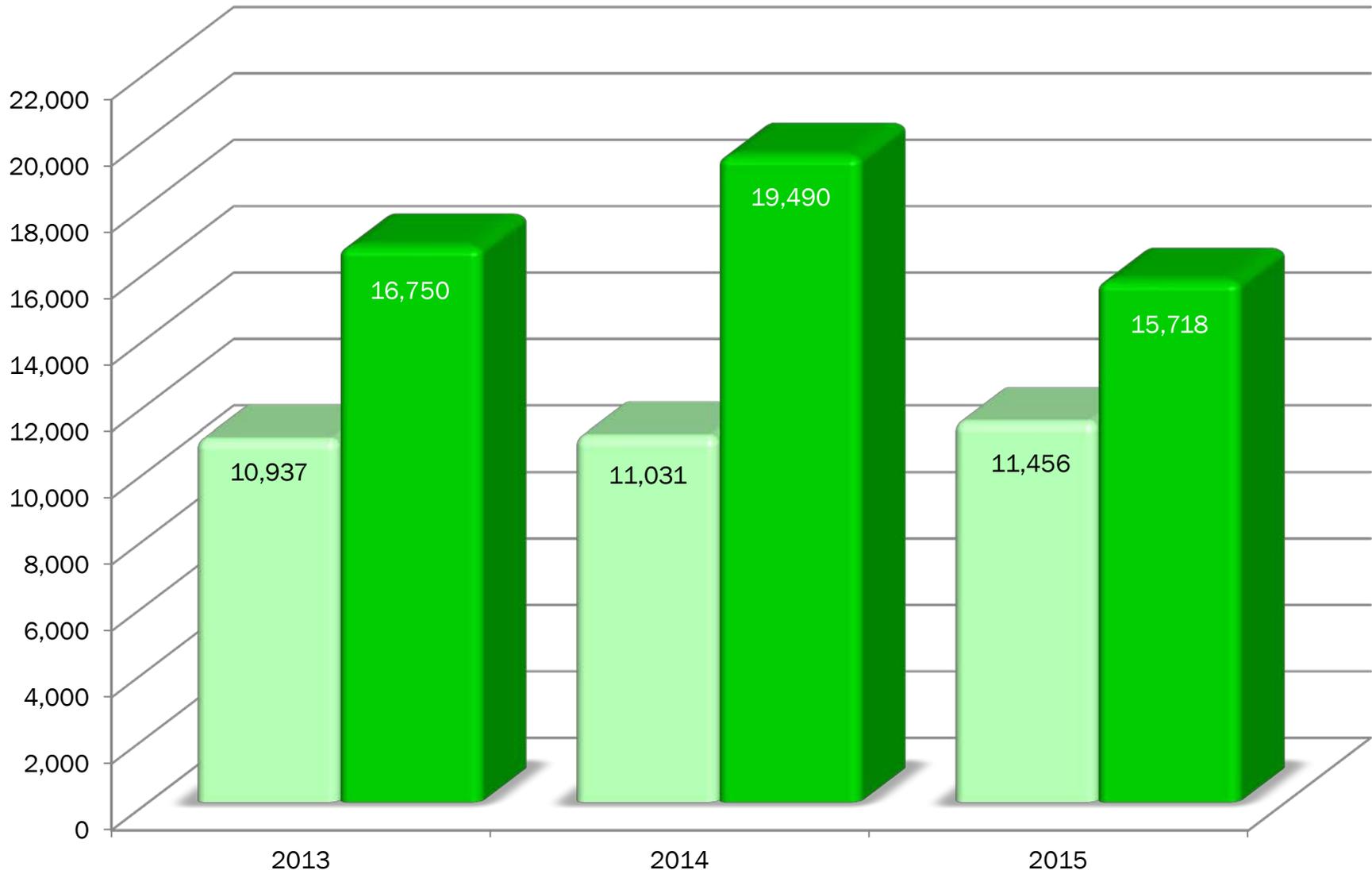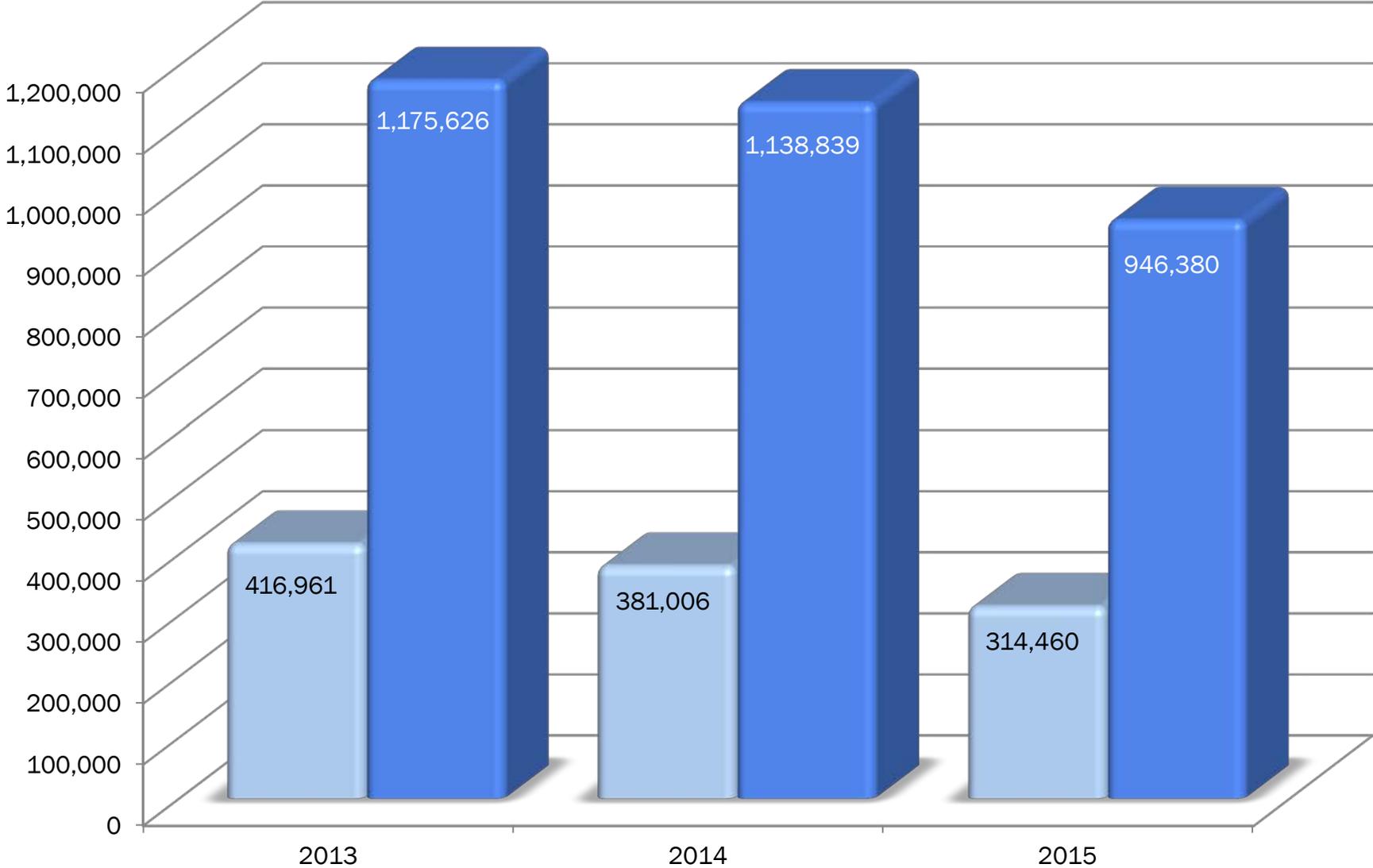
Appendix B
Long Distance Carriers of Choice

Long Distance Carriers for Minnesota Relay

- 011 Communications
- 10-10-220 Telecom USA
- 10-10-321 Telecom USA
- 10-10-502 WorldxChange
- 10-10-636 Clear Choice
- 10-10-752 EXCEL
- 10-10-811 Vartec
- 10-10-834 WorldxChange
- 10-10-987
- 702 Communications
- ACN Communications, Inc.
- ACS Connections Long Distance
- ACS Long Distance
- ANI Networks
- AT&T
- Ace Long Distance
- Advantage Communications
- Affinity Network, Inc.
- Albany Telephone Long Distance
- Arrowhead Long Distance
- Barnesville Long Distance
- Benton Telephone Long Distance
- BEVCOMM, Inc.
- Birch Telecom/Ionex Comm.
- Blackduck Long Distance
- Blueridge Telecom Systems
- Broadwing Communications
- Broadwing Telecom
- CI Long Distance
- CP Telecom
- CTC Long Distance
- CTI Long Distance
- Cannon Valley Long Distance
- CenturyLink
- CenturyTel LLC
- Charter Communications
- Christensen Communication Company
- CierraCom Systems
- Citizens Communications
- Comcast
- Comcast Business Communications
- Connections Long Distance
- Consolidated Communications
- Cooperative Light & Power
- Crosslake Long Distance
- Crystal Communications, Inc.
- Delavan Long Distance
- Dunnell Long Distance
- Eagle Valley Long Distance
- EliteView, LLC
- Embarq Communications
- Emily Long Distance
- En-Tel Communications
- Enventis Long Distance
- Eschelon Telecom, Inc.
- Exit Mobile
- Farmers Long Distance
- Federated Long Distance
- Felton Long Distance
- Frontier Communications
- GTC Telecom
- Garden Valley Long Distance
- Gardonville Long Distance
- Global Crossing
- Granada Long Distance
- GroveLine
- HBC Long Distance
- Halstad Long Distance
- Hancock Long Distance
- Harmony Telephone Company
- HickoryTech
- Home Telephone Long Distance
- Hometown Solutions Long Distance
- Horizon Telecom, Inc.
- HorizonOne Communications
- Hutchinson Telecommunications
- ITC Long Distance
- Integra Telecom
- Inter-Tel NetSolutions, Inc.
- International Plus
- Internet Business Association
- iVantage Network Solutions
- KMTC Long Distance
- LDDS
- Lakedale Communications
- Level 3
- Lightyear Network Solutions
- Lismore Long Distance
- Lonsdale One Plus
- Loretel Long Distance

- Lowry Long Distance
- MCIWorldCom
- MIDCO
- Mabel Cooperative Telephone Co.
- Madelia Long Distance
- Mainstreet Communications Long Distance
- Mainstreet Long Distance
- McLeod USA
- Melrose Long Distance
- Metromedia
- Midcontinent Communications
- Midwest Long Distance
- Milaca Local Link Long Distance
- Minnesota Valley Communications, Inc.
- NOS Communications, Inc.
- NOSVA Limited
- New Ulm Long Distance
- Norlight Telecommunications Inc.
- North Dakota Long Distance
- Northstar Access Long Distance
- NU-Telecom
- OPEX Long Distance
- Onvoy
- Optic Communications
- Orbit Com, Inc.
- Osakis Long Distance
- OtterCom, Inc.
- Ottertail Telecom Long Distance
- PAETEC Communications, Inc.
- POPP.Com
- Park Region Long Distance
- Peoples Long Distance
- Pine Island Long Distance
- Pioneer Telephone
- PrairieWave Communications
- QuantumLink Communications
- Qwest
- Red River Long Distance
- Reduced Rate Long Distance, LLC
- Redwood Long Distance Company
- Reliance Telephone Inc.
- Rochester Telecom System, Inc.
- Rothsay Long Distance
- Royale Comtronics, Inc.
- Runestone Long Distance
- SBC Long Distance
- Sleepy Eye Long Distance
- Speedway Long Distance
- Spring Grove Communications
- Sprint
- St. James Long Distance
- Sytek Comm Long Distance
- TCG Minnesota, Inc.
- TCO Network
- TDS Telecom
- TTI National
- TW Telecom, Inc.
- Telecom One, Inc.
- Telegroup
- Telephone Associates, Inc.
- Touch America
- TouchTone Communications
- Trans National Communications International, Inc.
- TransWorld Network Corp
- U.S. Telecom Long Distance, Inc.
- USL
- Unitel Long Distance
- Velocity Telephone, Inc.
- Venture LLP
- Verizon Long Distance
- Verizon Select Services (VSSI)
- VoIP Communications
- WCTA Long Distance
- WH Comm
- WTC Long Distance
- Wiltel
- Windom Long Distance
- Windstream Communications, Inc.
- Woodstock Long Distance
- Working Assets
- WorldCom
- XO Communications

Appendix C
Minnesota Relay Outreach

2015 Minnesota Relay Outreach

Date	Type of Outreach	Location	City	Participants
January 7	Presentation	Ageless Care	Roseau	14
January 13	Presentation	Oxbowl Bend Apartments	Coon Rapids	12
January 23	Booth	Project Community Connect	Rochester	25
January 29	Presentation	Clay County Social Services	Moorhead	16
February 9	Training	DHHSD Metro Office	St. Paul	1
February 05	Presentation	Adult Day Care	Bemidji	25
February 12	Presentation	North Gables Apartments	Blaine	12
February 13	Presentation	Silver Lake Pointe	Mounds View	12
February 17	Booth	Neighborhood House	St. Paul	5
February 18	Presentation	Zumbro Valley Health Center	Rochester	23
February 23	Presentation	Country Manor Senior Apartments	Sartell	35
February 24	Presentation	Eastside Neighborhood Services	Minneapolis	8
February 24	Presentation	Land of the Dancing Sky (AAA)	Warren	9
March 02	Presentation	Jewish Community Center	St. Paul	35
March 05	Booth	Rasmussen College - Yellow Ribbon Career Fair	Mankato	7
March 10	Presentation	Adult Community Center/Senior Center	Marshall	46
March 10	Presentation	Arbor Lake Commons	Maple Grove	13
March 18	Presentation	Senior Network	St. Cloud	12
March 18	Booth	C.A.R.E Program	Grove City	13
March 19	Presentation	Elder Network	Rochester	16
March 19	Presentation	Valley View Estates Assisted Living	Long Prairie	11
March 19	Drop-In	Buffalo Community Center	Buffalo	1
March 19	Booth	Project Homeless Connect	Waite Park	45
March 19	Booth	Touching Hearts at Home- New London	New London	2
March 21	Booth	Wellness Expo	Sartell	40
March 31	Presentation	Legends at Heritage Place	Sartell	14
March 27	Presentation	Edina Senior Center	Edina	13

2015 Minnesota Relay Outreach				
Date	Type of Outreach	Location	City	Participants
March 26	Presentation	West 7th Community Center	St. Paul	4
March 25	Presentation	Elder Network- Winona	Winona	15
March 24	Booth	Living at Home Block Nursing Program	Atwater	18
April 3	Presentation	The Senator Condos	Alexandria	15
April 8	Booth	Assistance Council for Veterans	Duluth	20
April 8	Presentation	Senior Center	Mahnomen	6
April 9	Booth	School District	Rochester	16
April 16	Presentation	Senior Center	Hallock	19
April 16	Presentation	Benet Place South	St. Cloud	13
April 21	Booth	Senior Expo	Gaylord	46
April 24	Booth	Roseville Area Senior Program	Roseville	35
April 28	Presentation	Keystone Community Services	St. Paul	15
April 29	Presentation	Department of Human Service - Deaf and Hard of Hearing Services Division	St. Cloud	40
May 1	Presentation	Columbia Heights Senior Center	Columbia Heights	8
May 6	Booth	Mille Lacs County Community & Veterans	Milaca	1
May 7	Presentation	Southwest Senior Center	Minneapolis	25
May 11	Presentation	Thief Lake Living at Home/Block Nurse Program	Middle River	5
May 12	Booth	Senior Expo	Mankato	73
May 12	Presentation	Disabled American Veterans of MN	Mankato	35
May 13	Presentation	Park Elder Center	Minneapolis	9
May 13	Presentation	Land of the Dancing Sky Area Agency	Warren	15
May 13	Presentation	Sunshine Apartments (Senior Living)	Worthington	17
May 13	Presentation	Buffalo Ridge Apartments (Senior Living)	Worthington	4
May 18	Presentation	Hoffman Senior Center	Hoffman	20
May 20	Presentation	Central Minnesota Council on Aging	St. Cloud	9
May 20	Booth	YMCA	Lino Lakes	21

2015 Minnesota Relay Outreach				
Date	Type of Outreach	Location	City	Participants
May 20	Presentation	Centercare	St. Cloud	40
May 20	Presentation	Pathways Counseling Center	St. Paul	40
May 20	Presentation	Senior Center/Semcac Senior Dining	Faribault	35
May 21	Presentation	Open Cities Health Center	St. Paul	85
May 27	Presentation	Living at Home Block Nursing Program	Park Rapids	12
June 04	Presentation	Briarwood	Perham	8
June 04	Presentation	St. James Manor	Perham	14
June 06	Presentation	Ruby's Pantry	Pine City	125
June 10	Booth	Bluestem	St. Cloud	75
June 13	Booth	Promise Neighborhood of Central MN	St. Cloud	35
June 15	Presentation	Sanford Health Baker Park Housing	Bemidji	7
June 17	Booth	Northeast Senior Services & Autumn Woods Apts	St. Anthony	1
June 19	Presentation	Centracare	St. Cloud	75
June 22	Presentation	Felton Senior Center	Felton	5
June 29	Presentation	Baudette Brink Senior Center	Baudette	3
July 7	Presentation	Senior Linkage Line - Central MN Council on Aging	St. Cloud	17
July 8	Presentation	Mary Ann Young Senior Center	Blaine	12
July 9	Presentation	Houston County Public Health Nurse	Caledonia	16
July 13	Presentation	Coon Rapids Senior Center	Coon Rapids	15
July 13	Booth	CSA and CCOA Community Fair	St. Paul	9
July 15	Presentation	The Oaks and Poplar Creek Assisted Living	Luverne	12
July 16	Booth	Land of the Dancing Sky Area Agency on Aging	Warren	35
July 20	Presentation	Elder Network	Wabasha	8
July 20	Presentation	Glyndon Senior Citizens Center	Glyndon	25
July 22	Presentation	Shingle Creek Commons (Common bond)	Minneapolis	14
July 24	Presentation	Creekside Community Center	Bloomington	17
July 27	Presentation	Penelope 35 Apartments	Bloomington	12

2015 Minnesota Relay Outreach				
Date	Type of Outreach	Location	City	Participants
July 30	Booth	Comprehensive Health Services	Red lake	15
August 3	Presentation	Heritage Community Center	Thief River Falls	53
August 4	Presentation	Kiwanis	Thief River Falls	8
August 6	Presentation	Nelson Gables Senior Care	Alexandria	10
August 12	Presentation	Senior Citizens Nutrition Center	Detroit Lakes	8
August 13	Booth	Forest Lake Senior Center	Forest Lake	35
August 17	Presentation	Inver Grove Heights Senior Center	Inver Grove Heights	55
August 18	Presentation	Mount Olivet Day Services	Minneapolis	48
August 19	Presentation	Bagley Senior Center	Bagley	11
August 19	Booth	Caregiver Connections Expo	Rochester	67
August 19	Presentation	Senior Network	St. Cloud	20
August 20	Presentation	Mille Lacs Health System	Onamia	16
August 20	Presentation	Young at Heart	Mahnomen	21
August 21	Booth	Alexandria Senior Community Center	Alexandria	20
August 21	Booth	Managed Care Programs for Seniors and People with Disabilities	St Paul	15
August 25	Social Event	Deaf and Hard of Hearing Services Division	Moorhead	20
August 31	Presentation	Rothsay Senior Citizens	Rothsay	13
September 1	Booth	Golden Rule Building	St Paul	48
September 2	Presentation	Senior Center	Sebeka	15
September 9	Presentation	St. Joseph's Health	Park Rapids	14
September 9	Booth	Senior Safety Camp - Coon Rapids Senior Center	Coon Rapids	37
September 10	Booth	Minnesota Social Services Association Conference	Moorhead	35
September 15	Booth	Eastside Neighborhood Services	Minneapolis	95
September 15	Presentation	Warroad Senior Living Center	Warroad	20
September 16	Presentation	Skyway Senior Center	Minneapolis	4
September 17	Presentation	Senior Site	Oklee	6

Date	Type of Outreach	Location	City	Participants
September 21	Presentation	Care Coordinator Workgroup	St. Paul	33
September 28	Presentation	Traverse County Social Services	Wheaton	10
October 2	Booth	CentraCare	St. Cloud	18
October 6	Presentation	Senior Site	Oklee	10
October 7	Meeting	Senior Network	St. Cloud	22
October 8	Presentation	Lifelong Learners	Mankato	20
October 8	Booth	Project Homeless Connect	Waite Park	15
October 8	Presentation	Riverside Assisted Living	Pillager	8
October 9	Presentation	Vison Loss Resources	St. Paul	14
October 12	Presentation	Echo Ridge Presbyterian Homes	Oakdale	17
October 13	Booth	Living Well at Any Age	Eagan	45
October 14	Presentation	Lion's Club	Bagley	10
October 14	Booth	MN Assistance Council for Vets StandDown Event	Mankato	45
October 14	Presentation	Prairie Five Community Action	Montevideo	20
October 22	Presentation	Lion's Club	Greenbush	5
October 26	Presentation	St. Gall's Catholic Church	Tintah	6
October 28	Booth	MN State Council on Disability - ADA at 25	St. Paul	35
November 6	Presentation	Park Villa Apartments	Park Rapids	14
November 13	Booth	MN Assistance Council for Vets StandDown Event	Marshall	52
November 16	Presentation	St. Paul Community Education	St. Paul	10
December 3	Meeting	Senior Network - St. Cloud	St. Cloud	28
December 7	Presentation	Minnetonka Recreation and Senior Services	Minnetonka	12
December 16	Meeting	Senior Network - Big Lake	St. Cloud	11

2015 Minnesota Relay Outreach

# Appendix D
TED Program Activities

2006 - 2015 New TED Program Participants

■ New Program Participants Served ■ Devices Distributed to New Program Participants
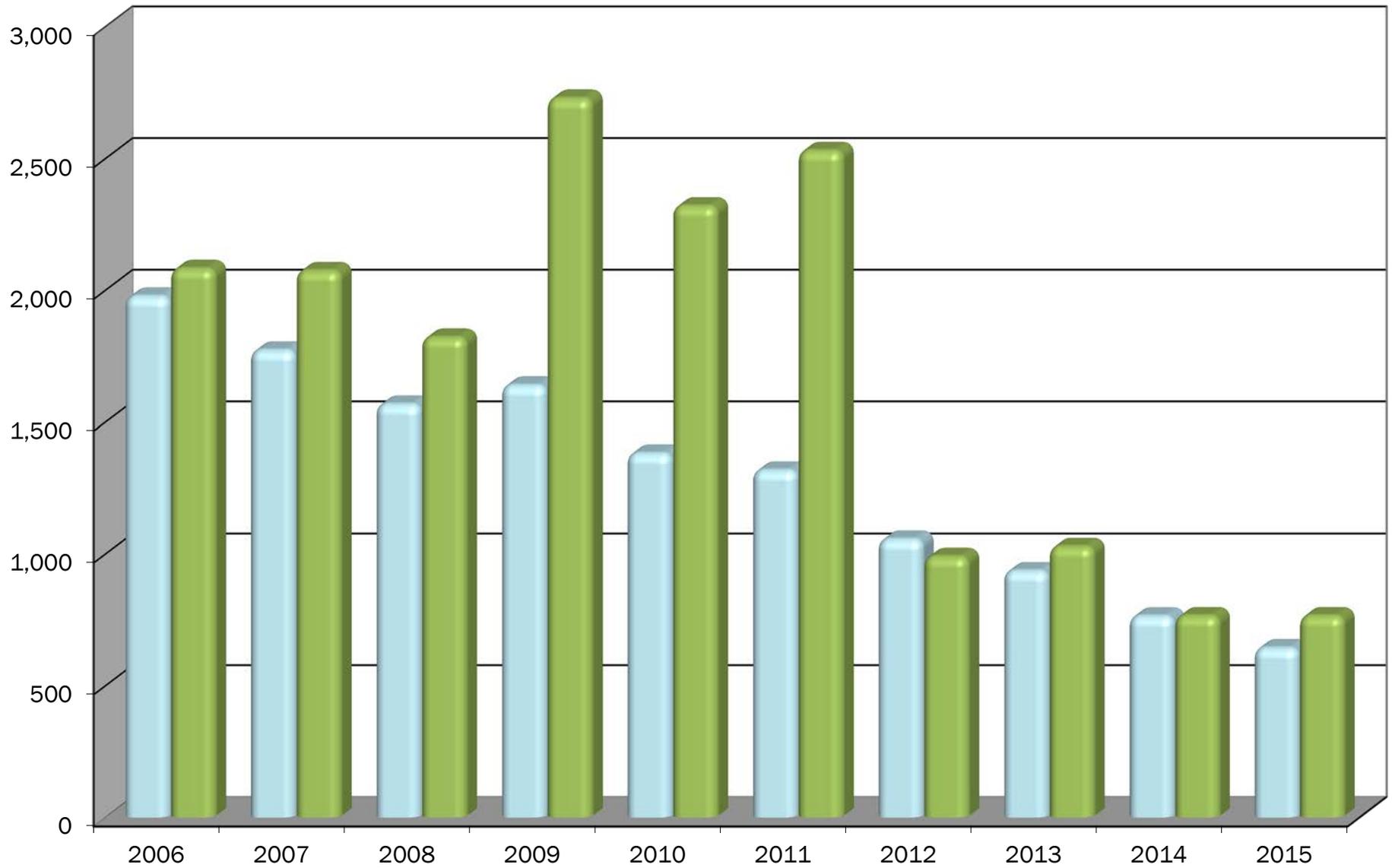
TED Program
Types of Equipment Distributed in 2015

Amplified Phones
63.1%

Captioned Telephones
18.9%

Auxiliary Equipment
12.3%

Speaker Phones
3.8%

TTYs
0.4%

Cell Phones
1.4%
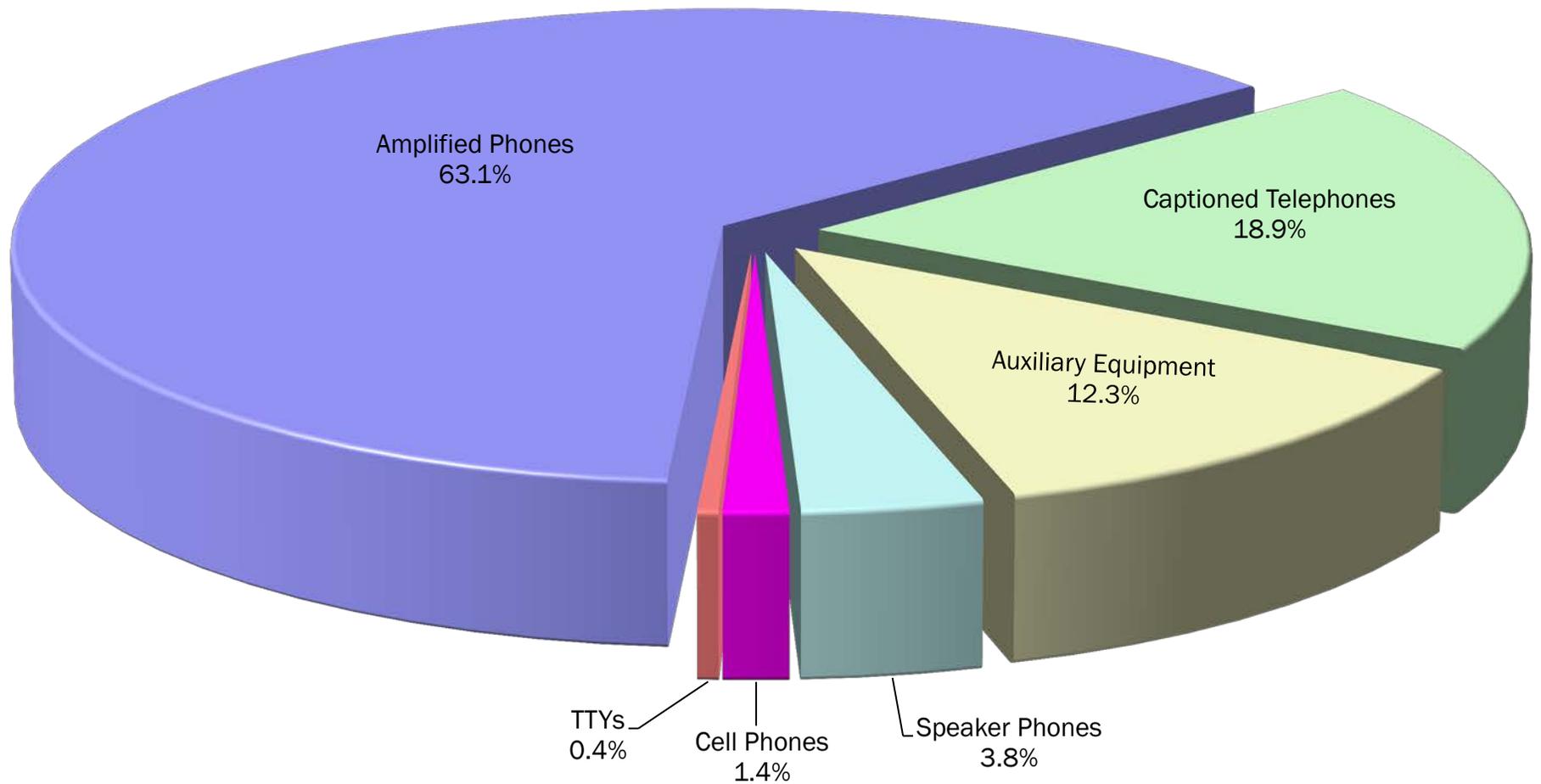
*Auxillary equipment includes ring signalers, neck loops, headsets, pendants, switches, etc.

Minnesotans Being Served by the TED Program in 2015

Outreach Participants at presentations/booths
5,317 (69%)

Repeat Program Participants
1,467 (19%)

New Program Participants
642 (9%)

Information & Referrals
240 (3%)