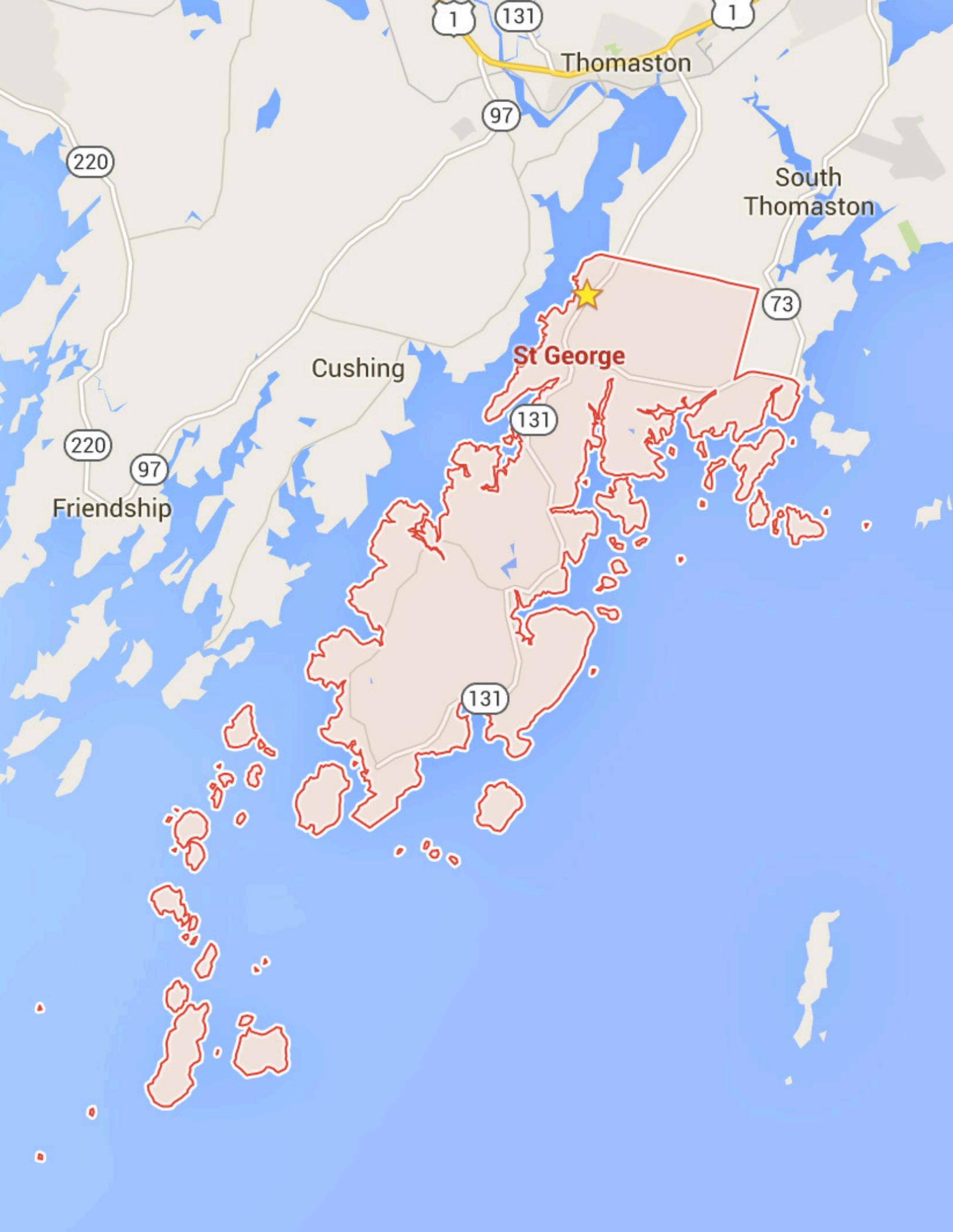


# ConnectME Planning Grant Application

**Prepared by:**  
Town of St. George, Maine  
Ad Hoc Community Broadband Committee

**Date:**  
April 15, 2016





Thomaston

South Thomaston

Cushing

St George

Friendship

1

131

1

97

220

73

220

97

131

131

# Application Packet

# Round One Community Planning Grant Application

**Due Date:**

April 15, 2016

**Date:**

4/15/2016

**Submitting Community:**

Town of St. George, Maine

**Grant Amount Requested:**

\$39,147

**Community Project Point of Contact:**

Jeff Boulet, Committee Chairperson

14 Thorn Bush Lane

St. George, Maine

207 372-2069

[jeff.boulet@gmail.com](mailto:jeff.boulet@gmail.com)

**Party Who Prepared Application:**

Ad Hoc Community Broadband Committee, Town of St. George, Maine

**Contact through:**

Jeff Boulet, Committee Chairperson

14 Thorn Bush Lane

St. George, Maine

207 372-2069

[jeff.boulet@gmail.com](mailto:jeff.boulet@gmail.com)

**Executive Summary of the Project:**

The Town of St. George, which includes the villages of Port Clyde, Clark Island, Glenmere, Martinsville and Tenants Harbor, is seeking state grant funding to identify and understand how best to expand broadband access to unserved and underserved areas of the peninsula. While most homes and businesses along the main routes in St. George have sufficient broadband access, many businesses and residents within the shoreland zone – private roads and side roads – do not have broadband access. Broadband access within these zones would increase public safety by improving access to emergency services, aid in digital literacy and help eliminate the homework divide that affects many students in our K-8 school. Broadband access creates a level playing field for traditional Maine businesses such as lobstering, fishing, and shellfish processing, aids local micro businesses that are operated out of homes, and helps our artists and artisans connect with regional, national and international museums and galleries.

# Community Broadband Planning Grant Application

## Attachment A

### PRE-CERTIFICATION CHECKLIST

A community must answer each of these items to be certified for the planning grant process. A “no” answer is perfectly acceptable; this is a stakeholder and information gathering process. A community may submit the pre-certification checklist to ConnectME at any time, even at the same time as the Community Broadband Planning Grant Application. Once certified, a community will be eligible to participate in the competitive process to receive funds from the Authority for a Community Broadband Planning Grant. The community will also be listed on the Authority’s website as a Pre-certified Community.

#### 1. Create a Community Broadband Team

- Provide list of members, including name and title:
  - Richard Bates, Select Board Representative, EMT volunteer
  - Jeff Boulet, Resident and local business owner, Designated Point of Contact for communications with ConnectME
  - Christopher Caffrey, Resident and Independent IT Contractor
  - Susy Ellis, Resident and local business owner
  - Alane Kennedy, Resident and local business owner
  - Ann Matlack, Resident
  - Betsy Welch, Resident and local business owner
- Must designate single point person for communications with ConnectME for certification process, provide email address to ConnectME.
  - Jeff Boulet, [jeff.boulet@gmail.com](mailto:jeff.boulet@gmail.com)

#### 2. Hold at least one Community Broadband Meeting

- Send emails to broadband providers currently serving your community and invite them to the community meeting.
- Share results of ConnectME Mapping for this community.
- Questions for attendees:
  - Which providers are currently serving your community?
  - Which providers attended your meeting?
  - How do the mapping results compare with members’ actual experiences?
  - Does existing broadband access meet your needs?
  - If it is inadequate in what ways does it fall short?
  - If you have broadband, how do you use it now?
  - Provide documentation showing meeting dates, notes, agenda and number of attendees, emails to providers and responses to the questions above.

- [ConnectME may need to provide guidance/suggestions on how address areas of this section]

All meeting minutes are attached and include notes from our meetings with ConnectME, TimeWarner Cable and Tilson Technology. We have also included a public survey of broadband speeds in which 47 residents participated.

We met with:

- **Lisa Leahy**, ConnectME
- **Mike Edgecomb**, TimeWarner Cable
- **Susan Inches**, Tilson

**Lisa Leahy** helped clarify the early steps in addressing our broadband needs. She provided us with the pre-certification checklist and explained how the grant application process works. Our conversation touched on recent wireless innovations, other community broadband initiatives and how we should directly reach out to representatives of ISPs and potential technology partners.

**Mike Edgecomb** gave us Google Earth GIS data of TimeWarner's fiber and broadband network within the town of St. George. Though it loosely corresponded with ConnectME's maps, it appeared more complete. We verified that some of the service was correct however we did find discrepancies with his data. For example, his map shows coverage on a dirt road off Clark Island Road when, in fact, there is no service along that private road. Attached at the end of this document are our relevant email correspondence.

We also met with **Susan Inches of Tilson Technology** who encouraged us to apply for the planning grant. She discussed the various options and technologies available and how a planning grant would help the community. Our email correspondence with Susan was limited to planning the meeting date and time.

In conclusion, we found that, while existing broadband services are available on main roads, many businesses and residents located within the shoreland zone and on secondary roads or private roads are unserved or underserved.

### 3. Identify Key Documents/Existing Efforts

- Does the municipality use broadband to deliver municipal services? Describe the services, and how broadband is used to deliver these services. (e.g., town office has a broadband connection it uses to submit information to state government, police department uses broadband to communicate with state or federal databases or assessors' office make access to property records and maps available to the general public)

The Town of St. George uses broadband to provide education, emergency services and to send town announcements regarding important closings, emergency shelter information, maintain the town's website and meetings and elections. The town office also uses the available broadband services to submit information to state government and federal databases. The St. George Municipal School Unit uses the broadband service in their curriculum and to provide online reporting of grades and teacher comments to parents and guardians. The St. George Emergency Services provide Community Para-Medicine to residents which requires the use of wireless technology where it is available.

- Is there local or regional economic development plans in which broadband could play a role? If so, provide a list of these documents.

The 2013 Comprehensive Plan lists “support access to high speed communications in all homes in St. George” as a strategy to “promote an economic climate that increases job opportunities and overall economic well being for St. George residents.” Local business owners have joined together and formed an alliance to encourage and pursue economic development for the entire town of St. George. Additionally, as a result of joint exercises between St. George Emergency Services and South Thomaston Emergency Services, the need to collaborate and share information between towns efficiently was identified and is rapidly becoming an economic development plan.

- Does the town have a cable franchise agreement?

No.

- Are there any on-going community projects focusing on the digital divide or information technology (public access through schools or libraries, training, improving access to broadband, etc.)?

The Jackson Memorial Library in St. George provides training, community outreach and technology training to local residents. The St. George Municipal School Unit provides student iPads and curriculum that includes computer programming and research, as well as, education enrichment.

- Is there tax increment financing or other economic development grant for all or part of the area to be served?

There are no TIFs and no economic development grants for the service area.

- Does the town have a municipal electric company? If not, what electric utilities serve the area?

The town of St. George does not have a municipal electric company. Electric services are provided by Central Maine Power.

#### 4. Identify potential Community Anchor Institutions

- Provide a list of potential community anchor institutions.

Emergency Response Services  
 St. George School Municipal Unit  
 Jackson Memorial Library  
 St. George Business Alliance  
 Herring Gut Learning Center  
 Marshall Point Lighthouse and Museum

- Provide a list of commercial institutions that could benefit from lower cost, higher bandwidth, and/or improved reliability of broadband.

Alane M Kennedy Web Development  
 APB Stone + Landscape  
 Bagel Shack  
 Beal's Carpet Care  
 Beckett's Auto Service  
 Betsy Welch Design  
 Black Harpoon  
 Blue Tulip Garden Boutique

Blue Tulip Landscaping  
Blue Tulip Lodging  
By The Bay Jazz Trio  
Carolwood Productions  
Coast Line View  
Coastal Documentation  
Craignair Inn  
Dharma Design Furniture  
Dip Net  
East Wind Inn  
First Light Gallery  
Gallery by the Sea  
Gayle's Custom Creations  
GC Minery Plumbing & Heating, Inc.  
Granite Gallery  
Green Bean Catering  
Sandra A Hall  
Happy Clam, The  
Hedgerow  
Herring Gut Learning Center  
Ibis Arts  
Jackson Memorial Library  
Jane Derbyshire, Artist  
JD Miller Construction  
Kathleen Fox Watercolors  
Knox Museum  
Cindy Lang  
Linda Bean's Maine Vacation Rentals  
Linda Bean's Wyeth Gallery  
Linda Funk Illustration  
Logan Woodbridge Builders  
LT Auctions  
Lucinda Talbot, LCSW  
Maine Coast Petroleum  
Mars Hall Gallery  
Marshall Point Lighthouse Museum  
Marvon W. Hupper  
Midcoast Duct Cleaning  
Mill Pond House Bed & Breakfast  
Jake Miller  
Jeff Boulet Design  
Monhegan Boat Line  
Monhegan Wellness  
Ocean House Hotel  
Ocean View Grange  
Old Woods Farm  
Oryx Worx Fitness  
Peggy Crockett, Realtor BHGRE, The Masiello Group  
Peninsula Construction & Property Management  
Pond House Gallery & Framing

Port Clyde Art Gallery  
Port Clyde General Store  
Real Finds Consignment Shop  
Sea Hag Seafood  
Sea Star Shop  
Seaside Inn & Barn Cafe  
Squid Ink Coffee  
St. George Carriage Co.  
St. George Community Sailing Foundation  
St. George Dragon  
Stonefish  
Studio Hannah  
Sunshine Farm Books and Cards  
Sylvia Murdock Studio  
T.H.E. Salon  
Tenants Harbor Boatyard  
Tenants Harbor General Store  
The Boathouse Rental  
The Corner Store (Vintage Vanilla)  
True Hall Real Estate  
Turkey Cove Auto Repair  
University of Maine 4H Centers at Tanglewood and Blueberry Cove  
Wyeths by Water  
Yard Bird Canteen

## 5. Create a Vision Statement

- A Vision Statement is created by Community Broadband Team with input from public at the Community Broadband Meeting, with the goal to take a first step toward being able to set a direction for the community's future broadband efforts.

The St. George Community Broadband Team seeks universal broadband coverage to all businesses and residents in the Town of St. George. Because we are a coastal community, many residents and businesses are sited directly in shoreland zones and on secondary and private roads where broadband services are weak or unavailable. Universal broadband will help in the following ways:

- improve community health outreach
- close the homework gap
- improve digital literacy
- enhance emergency services collaboration between coastal townships
- enable work-from-home opportunities
- improve business readiness
- connect coastal artists and artisans with an international marketplace
- connect local fisheries with regional and national markets

# COMMUNITY BROADBAND PLANNING GRANT APPLICATION SCORING CRITERIA

Applications are scored on the narrative provided for following criteria.

## 1. Project Plan – 25 points

### 1.1 Provide documentation of project management plan.

**Applicant:** Town of St. George

**Point of Contact:** Jeff Boulet, jeff.boulet@gmail.com, is our committee chair who provides guidance and direction for meetings.

**Broadband Committee Members include:** Betsy Welch (Secretary), Ann Matlack (committee member), Alane Kennedy (research), Richard Bates (Select Board representative), Susy Ellis (Committee member), Chris Caffrey (committee member)

**Additional staff or support:** none

**Consultant:** Tilson Technology

**Managing Entity:** The town of St. George would manage grant funds.

The St. George Ad Hoc Community Broadband Committee was formed to investigate the current options for broadband access in St. George, the potential needs and future prospects for improvement of internet access, and to prepare a report to the Select Board with the Committee’s findings and any recommendations on how the Town may usefully assist with these improvements. The committee has held six public meetings where they have exchanged gathered information, heard from local service providers, collaborated with ConnectME and Tilson and heard from residents about their current broadband services and their interest in improvements.

The project plan for the proposed planning study is described in detail under A-F below. It consists of a study of the existing infrastructure, needs and gap analysis, identifying potential solutions and putting a strategy in place to implement those solutions. We expect the planning study to take up to 9 months as indicated below.

### 1.2. Provide the timeline to complete the proposed community plan deliverable.

Task	Month 1	2	3	4	5	6	7	8	9
Community Planning and Outreach									
Asset Inventory and Gap Analysis									
Wireless Design									
Business Modeling									
Review of Ordinances and Plans									
Digital Inclusion and Collaboration									
Final Report and Community Workshop									

## 2. Plan Deliverables – 20 points

2.1 Provide narrative addressing how the items A. – F. below will be addressed in the final plan delivered to the community.

### **A. Define local broadband needs and goals.**

The goal of the committee is to achieve universal broadband access within St. George. Our research shows that dirt roads, private roads and areas of recent construction and low population density do not have broadband access. Tilson will work with the town to develop agendas for up to two stakeholder meetings to identify, clarify and prioritize community broadband needs and goals.

The needs and goals will be consistent with the community's Broadband Vision Statement and will address geography, speed, reliability, digital literacy, affordability, and accessibility. Goals and needs will be broken out by user segments, if applicable.

### **B. Inventory existing broadband infrastructure assets within the municipality, municipalities or regions.**

Broadband infrastructure will be inventoried through presentations and discussions with carriers who serve the region. In St. George, the infrastructure study will focus on existing fiber and wireless assets, because the goal is not to create a redundant system, but rather to develop cost-effective service to areas that are currently either unserved or underserved. Tilson will invite up to four carriers to present in St. George. Tilson provide an outline to carriers in advance, requesting information about current services, technologies used, maps of service areas and planned investments. In the carrier meetings, Tilson will probe for the level of interest in serving the region, and what carriers need in order to invest in the region. Tilson will also independently research internet service and coverage plans in the town and nearby areas, to provide information to the town on pricing and internet packages currently available. A summary report of existing infrastructure and maps are the deliverables from this section.

### **C. Include a gap analysis defining the additional broadband infrastructure necessary to meet identified needs and goals.**

This deliverable will outline the infrastructure needed to meet the community's needs and goals and compare it with the existing assets identified above. Some options may address some, but not all, of a community's goals. If this is the case, emphasis will be placed on community priorities.

### **D. Include one or more potential network designs, cost estimates, operating models and potential business models based on input from broadband providers operating within the municipality, municipalities or region and any other parties that submit a network design solution in the course of developing the plan to address any broadband gaps identified in paragraph C.**

For the town of St. George, Tilson will provide a wireless design, working in-house and in partnership with a wireless provider, as follows:

A. Develop a typical capital cost range for three major types of supporting structures: existing towers or suitable rooftops, pole-mounted small cells, and new tower construction. This will include estimates for site acquisition, permitting, engineering and construction.

B. Conduct a review of public databases of tower sites and review municipally-owned tower

sites and available rooftops (these sites to be provided by the municipalities) accompanied by a general field survey (but not an engineering study of these sites).

C. Estimate the approximate number and type of sites required and hypothetical locations to provide service to each micro-region for either an LTE- or unlicensed-wireless design based on typical range of these technologies, major terrain features, and the distribution of premises, but not based on an Radio Frequency (RF) design. RF design elements will be done partnership with an RF fixed wireless provider.

In addition, Tilson will provide business modeling that will show the optimal subscription take rate, pricing and level of investment needed to address the internet needs and gaps in the community. Up to 3 business scenarios will be identified, using Tilson's computer modeling capability. This deliverable will give the community the information needed to make fully informed choices about broadband investments.

**E. Include an assessment of all municipal procedures, policies, rules and ordinances that have the effect of delaying or increasing the cost of broadband infrastructure deployment.**

Tilson may work with community planning, economic development and code enforcement personnel to develop an inventory of all local policies, such as acceptable use exceptions, height requirements, right of way limitations, etc., that may delay deployment. A focus will be on how a community might facilitate speedy permitting to enable new broadband infrastructure.

**F. Digital Inclusion**

Digital Inclusion is a broad term that includes digital literacy training, affordable access to the internet, and affordable computers. In the town of St. George, we have focused our digital literacy efforts in our library where we have 1 gigabit service through the Maine School and Library Network, public computer workstations, and personnel who can assist library users with computer issues.

We currently run a free weekly "Tech Help" at the Library where two volunteers (both committee members) help in all manner of digital literacy: from password resets to teaching artists how to format and distribute marketing materials for gallery submissions. The program is so successful that we've discussed expanding to offer a broader range of services for more specific needs. Examples include are Photoshop classes for artists and designers and web design classes for small business.

The library is also seeking grant funding to purchase wireless hot spots that may be signed out as an extension of the book and media lending service. The success of this effort would directly benefit low income residents.

The town will reach out to other groups in our community such as fish and shellfish (lobster) processing facilities, Herring Gut Learning Center, Hurricane Island Outward Bound, seasonal home rental owners, seasonal businesses within the shoreland zone who do a lot of their business through online booking and many of the other groups who will benefit from broadband access. Connecting with them will help us determine the needs and gaps and what organizations can help fill them. Tilson will help us to identify resources to fill the gaps we find. As an example, Tilson's partner Axiom Technology might offer training in our area and inexpensive computers to residents in our town. The deliverable from this section is a digital inclusion plan designed to meet our community's needs.

## G. Final Report and Community Workshop

One of the most important project components is to present the findings to the community leaders and citizens and to facilitate a workshop where the community can discuss their strategies and next steps. Tilson will write a final report, develop a powerpoint presentation and work with the broadband committee to create and facilitate a public workshop. This final step will serve to educate the community and formulate specific next steps to implement the plan.

### 3. Value Added Collaborations – 20 points

**3.1 Describe how the broadband community planning grant may generate improvements to community strength through collaborating in such areas as economic development, education, employment, governmental services, health care, public safety or other regional community oriented activities.**

This section should begin with existing collaboration that is already underway.

Tilson will meet with members of the St. George community and supporting institutions to understand where collaboration opportunities exist based on those institutions' current needs and long range goals. Collaboration opportunities include network infrastructure and cost sharing, workforce readiness training, K-12 education support, telemedicine, downtown revitalization, and emergency communication networks.

Tilson will work with the applicant to generate a list of supporting institutions, which may include school administration, public safety, health care providers, and institutions of higher learning, senior programming organizations, economic development corporations, county governments and locally active non-profits.

The final deliverable will include a list of supporting institutions, current needs and long range goals related to broadband, and a list of collaboration opportunities.

### 4. Budget – 15 points

**4.1 Submit budget aligned to significant Project Plan milestones, costs and tasks.**

#### St. George Budget

Task	Cost
Community Planning and Outreach	\$5323.50
Asset Inventory and Gap Analysis	\$6309
Wireless Design	\$11,000
Business Modeling	\$5400
Review of Ordinances and Plans	\$1080
Digital Inclusion and Collaboration	\$1080
Final Report and Community Workshop	\$5954.50
Town Grant Management and Survey	\$3000
<b>Total</b>	<b>\$39,147.00</b>

## **5. Overall Financial Feasibility – 15 points**

### **5.1 Describe the applicant's experience relevant to proposed project.**

Tilson is a multi-service technology firm that works with nonprofits, private enterprise and governments as they seek to improve and upgrade their communications networks. Tilson's in-house consulting team has leveraged this experience to help communities throughout New England create a broadband roadmap that will help achieve their economic development goals. Over the past two years, Tilson has conducted broadband feasibility study projects for 25 municipalities, 20 of them in Maine. These feasibility projects have helped communities articulate their goals and equipped them with key information needed to gain public support for a self-directed solution.

Tilson has helped several communities take the next step by crafting public-private partnerships between municipalities, network operators, and Internet service providers. Tilson has currently has implementation projects underway in Islesboro, ME, New Shoreham, RI and Ellsworth, ME.

Tilson prides itself in offering clients objective advice on technologies, potential partners, and partnership structures. Because Tilson does not provide or resell broadband services, there is no conflict of interest that might bias the firms view as it counsels clients on the tradeoffs of various technologies, potential service providers or operating models for a network. In addition, through Tilson's work in network deployment and past consulting projects, the consulting staff have relationships with most of Maine's service providers and are well informed of the latest developments in technology and public policy.

### **5.2 Provide a description of financial viability by submitting pro-forma financial statements for the project and applicant financial statements. Confidential financial information may be submitted and should be so marked and submitted in a separate file.**

Tilson Technology LLC, "Tilson," is a privately held company that was incorporated in the State of Maine in 1996. Tilson employs 160 people, and serves a diversified client base that includes federal, state and local governments and private customers across its network deployment and consulting practices. Tilson has submitted its confidential financial documentation demonstrating its financial viability to the ConnectME Authority directly in a folder marked "Confidential."

### **5.3 Provide a description of team member's background and roles.**

#### **5.3.1 Principal point of contact.**

Jeff Boulet, Committee Chair, Town of St. George;  
Susan Inches, Lead Consultant, Tilson

#### **5.3.2 Team member bios and role in planning project.**

*See below.*

#### **5.3.3 Provide proof of support and endorsement from the participating local municipalities.**

*See Pre-certification checklist.*

#### **5.3.4 Provide the names of local officials and community representatives that will be directly involved as members of the team.**

*See pre-certification checklist.*

### **Team Member Bios**

#### **Chris Campbell, Executive Sponsor, Tilson Staffing and Scheduling**

Chris Campbell is Tilson's Director of Broadband and Energy Consulting. He leads a team of professionals who provide strategic consulting expertise to states, communities, and firms seeking to improve telecommunications infrastructure and services and manage or develop networks.

Chris has 20 years of experience in technology, public policy and community development. Prior to joining Tilson, Chris was the Executive Director of the Vermont Telecommunications Authority (VTA) for almost five years. At the VTA, Chris led efforts to build new fiber networks and expand access to broadband and cellular service. In addition to fiber optic construction and cell site development, Chris had oversight of commercial contract development, grant making, and federal grant seeking. Prior to the VTA, Chris served as Director for Telecommunications at the Vermont Department of Public Service and Assistant Chief Information Officer for the State of Vermont.

He holds a B.A. in Economics and Environmental Studies from the University of Pennsylvania and a Master's Degree in Regional Planning from the University of Massachusetts-Amherst.

#### **Sue Inches, Lead Consultant, Project Management**

Susan Inches is a Senior Consultant at Tilson. She has over 20 years' experience in municipal planning, public policy and community outreach, with a demonstrated record of success in managing challenging political environments and developing and executing new programs. Prior to Tilson, Sue served three years as Chair of the Board of Coastal Enterprises Inc (CEI), an entity that provides financing and technical assistance to rural communities throughout Maine and the US. CEI has over \$800 million in assets under management and 85 employees. Sue also served as Deputy Director of the Maine State Planning Office, a 45-person state agency that provided policy analysis, research, and municipal assistance. Prior to that she served as Director of Industry Development at the Maine Department of Marine Resources, and was on the Board of the Maine Technology Institute, an organization that granted over \$20 million in R&D funds to businesses each year. She holds a BA from the College of the Atlantic and an MBA from the University of New Hampshire.

#### **Liza Quinn, Lead Consultant, Project Management**

Liza Hartmann Quinn brings her background in energy, telecommunications and town planning to her role as a Senior Consultant at Tilson. In the energy sector she worked with power producers and utilities to lower their cost of service and increase revenues. She also worked on teams to secure project and corporate financing, and provide analytical support to acquisitions and divestitures. Liza's telecommunications background started with cost modeling, pricing and transactional support of wholesale services, and progressed to a role a general manager of a \$77 million colocation services business unit providing space, power, security, and interconnection services to large telecommunications customers. At Tilson, Liza has worked with federal, state and local clients on broadband planning, partner selection, community engagement, and business model analysis. She holds an AB from Dartmouth College and an MBA and an MFS

from Yale University. She has taught Macroeconomics at SMCC has was on the Cape Elizabeth Planning Board for several years.

**David Radin, Lead Consultant, Business Modeling**

David Radin is a Senior Consultant in Tilson's Energy and Broadband practice. He has over 13 years of experience across IT, strategy consulting, and renewable energy. Prior to joining Tilson, David was a Senior Research Manager for Energy & Industrials at GLG, the world's leading platform for professional learning, where he served hedge fund clients across a variety of engagements. David also has experience assisting Wildcat Venture Management, a boutique investment firm, in conducting due diligence for development of microwave low-latency networks connecting North American and European trading centers. Previously, David was a developer of energy facilities – wind farms and coal gasification plants – for Gamesa Energy USA and Process Energy Solutions. He had overall responsibility for development of the 200 MW Minonk wind farm in Minonk, IL, as well as fuel and land procurement for multiple gasification plants to convert petroleum coke to natural gas. David has significant prior consulting experience at Everest Group, a boutique strategy firm, as well as system development and IT at Ernst & Young. He has a B.S. in computer science from the University of Illinois at Urbana-Champaign and an M.B.A. from Northwestern University's Kellogg School of Management.

**Nick Bournakel, Support to Lead consultants as needed**

Nick Bournakel is a Senior Consultant in Tilson's Energy and Broadband Group. Nick possesses a background steeped in regulatory analysis and business and has significant experience working with government agencies at both the state and federal level. At Tilson, Nick has worked with several municipalities, meeting with community leaders and residents to develop broadband plans for the towns of Bar Harbor and Mount Desert in Maine, as well as 13 Maine offshore island communities. He has previously worked as an independent consultant with a variety of clients in the cleantech sector and provided market and regulatory analysis for clients. Nick holds a BA in Philosophy from Bates College, as well as a JD from the University of Maine School of Law.

**Brenden DeAndrade, Analytical Support**

Brenden DeAndrade is an Associate Consultant in Tilson's Energy and Broadband Group. Brenden joined Tilson after working for five years at Verizon, where he held several positions with successively increasing responsibility in network engineering and operations support as a business analyst. At Verizon, Brenden performed project management and business analysis in a fast-paced, dynamic environment that required cross-functional coordination. This work included frequent coordination with municipalities on network operational issues. Brenden has a Bachelor of Science from the University of Massachusetts and is working towards his Master of Business Administration at Northeastern University.

**John Costa, Network Design**

John Costa is a Senior Outside Plant Engineer at Tilson. John brings expertise in field engineering, in particular, knowledge regarding siting, and radio frequency engineering. John has worked with many municipalities throughout New England, supporting the work of Tilson's broadband group in providing communities with telecom asset inventories, as well as high level fiber designs and cost estimates for these communities. Prior to Tilson, John worked as a Net-

work Engineering Manager for the Maine Fiber Company as well as a Senior Manager of OSP planning and alternate access for FairPoint Communications.

### 5.2.3 Provide proof of support and endorsement from the participating local municipalities.

April 11, 2016 - St George Town Select Board approval

### 5.2.4 - Provide the names of local officials and community representatives that will be directly involved as members of the team. (Applicant)

Richard Bates, Select Board representative  
Jeff Boulet, Committee Chairperson

## 6. Past Performance – 5 points

### 6.1 Provide documentation demonstrating past performance in executing grant funded programs.

In addition to Tilson's extensive past performance in community-funded (as opposed to grant funded) broadband planning in Maine and other parts of New England, Tilson has worked as a contractor or sub-contractor for state and federal grant-funded recipients. Three examples for past performance on grant-funded projects are detailed below:

**BTOP Grant:** The Three Ring Binder, Maine Fiber Company. The three ring binder is a 1,100 mile fiber optic project designed to deliver high-speed broadband connectivity to rural communities throughout Maine. Costing roughly \$32 million, the project received \$25 million in BTOP funding and was supplemented by private investment. The Maine Fiber Company engaged Tilson to serve as owner's project manager of the construction. Tilson oversaw all aspects of the deployment, including managing pole licensing, construction, adds/moves/hanges, testing, and network troubleshooting. The three-ring binder was completed in 2012 on budget and ahead of schedule.

**BTOP Grant:** The MassBroadband Institute, MassBroadband 123 Project. The MassBroadband 123 (MBI123) Project is a 1,300 mile fiber optic project designed to bring broadband service to the rural regions of Central and Western Massachusetts. Costing nearly \$90 million, the project leveraged \$45 million in BTOP funds and equal matching funds from the State of Massachusetts. The project links almost 1,400 community anchor institutions through a middle mile fiber network. Tilson served as the Project Manager through the Planning, Implementation, Monitoring and Closeout of the MassBroadband 123 project, overseeing the various project vendors and subcontractors, performing the actual construction and implementation of the project. Tilson project managed all vendors throughout the process in a complex Middle Mile Fiber Optic Buildout encompassing various stakeholders, including a large variety of Community Anchor Institutions (CAI's), Points of Interconnect (POI), and various Facility Owners on the project.

**State Broadband Initiative Grant:** Broadband Rhode Island. Tilson was as a sub-contractor of a National Telecommunications Information Agency (NTIA) State Broadband Initiative grant in the state of Rhode Island. Tilson assessed existing broadband and telecommunications infrastructure in two communities, and compared the community's available service to the rest of the state. As part of the grant, the Tilson team surveyed existing infrastructure including 13 towers, 120 unique demographic locations and conducted analyses of a year of Internet traffic metrics. Tilson also established working groups in both communities conducting a dozen outreach events to communicate the project mission and identify requirements, constraints and concerns. Tilson completed both projects with a final report that included detailed evaluation

of the price and benefit for 10 different broadband service packages sized for project growth and demand.

**6.2 Provide three client references.**

**Client:** Town of New Shoreham, RI  
**Project Name:** Broadband Plan and Network Designs Study  
**Contact Name/Title:** Nancy Dodge, Town Manager  
**Address:** 16 Old Town Road, P.O. Box 220  
New Shoreham, RI 02807  
**Phone:** (401) 466-3210  
**Email:** [townmanager1@new-shoreham.com](mailto:townmanager1@new-shoreham.com)

**Client:** Island Institute  
**Project Name:** Maine Off-Shore Islands Broadband Study  
**Contact Name/Title:** Briana Warner, Economic Development Director; Stephenie MacLagan, Economic Development Associate.  
**Address:** 386 Main Street Rockland, ME 04841  
**Phone:** (207) 701-1576; (207) 745-3371  
**Email:** [bwarner@islandinstitute.org](mailto:bwarner@islandinstitute.org); [smaclagan@islandinstitute.org](mailto:smaclagan@islandinstitute.org)

**Client:** Windham Economic Development Corporation  
**Project:** High Speed Broadband Planning in the Lakes Region  
**Contact:** Tom Bartell, Executive Director  
**Address:** 8 School Rd Windham, ME 04062  
**Phone:** 207-892-1936  
**Email:** [thbartell@windhammaine.us](mailto:thbartell@windhammaine.us)

## Meeting Minutes

This section contains meeting minutes from:

- November 9, 2015
- December 1, 2015
- December 7, 2015
- January 26, 2016
- March 31, 2016
- April 5, 2016

November 9, 2015

**Ad hoc Internet Service Availability Committee  
Minutes/Action Items**

Present: Richard Bates, Jeff Boulet, Susy Ellis, Ann Matlack, Alane Kennedy-Myers, Betsy Welch

Action items:

- Betsy will be secretary to record action items.
- Jeff will contact ConnectME, Lisa Leahy, to set up a meeting with her to discuss how they can help us formulate a plan to discover possibilities and providers
- Ann will contact Rick Bates, Town Manager of Rockport, to learn about what Rockport is doing.
- Ann will contact the Town Assessor of Islesboro to learn about their experience with
- Richard will draw up a sheet defining terms associated with broadband/internet.
- Alane will conduct an informal survey of residents on the peninsula to find what kind of speeds they are getting with their existing service.

Next meeting date to be set according to Lisa Leahy's availability.

Respectfully submitted,  
Betsy Welch

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December 1, 2015

**Ad hoc Internet Service Availability Committee  
Minutes/Action Items**

Present: Richard Bates, Jeff Boulet, Susy Ellis, Ann Matlack, Alane Kennedy-Myers, Betsy Welch.  
Guests: Lisa Leahy, ConnectME; Judy Smith; Chris Caffrey.

Lisa Leahy presented materials developed by ConnectME to assist communities in finding broadband Internet access using grants from ConnectME. She also presented a map developed with input from providers showing where they are currently providing service. She noted that this information has not been verified.

Action items:

Richard will review the Precertification Checklist to make sure we have the points covered. This checklist is a draft with a final form expected to be approved by ConnectME shortly. This is the first step in the competitive process of obtaining a planning grant from ConnectME.

Jeff will begin contacting known providers to have them come individually to meeting of the ISAC to discuss their interest in pursuing a grant to help provide more comprehensive service to St. George. These providers include:

- Time Warner (Mike Edgecomb)
- Axiom Technologies
- Tillson Technology
- Sewell (???)

Chris Caffrey joined the committee as a regular member.

The next meeting will be scheduled for next week with a provider if possible.

Respectfully submitted,  
Betsy Welch

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**December 7, 2016**

**Ad hoc Internet Service Availability Committee**

Present: Jeff Boulet, Susy Ellis, Ann Matlack, Alane Kennedy-Myers, Chris Caffrey Mike Edgecomb, Time-Warner Cable Director of Government Relations

Approval of Minutes:

November 9, 2015 – On a motion by Ann, seconded by Alane, Minutes were approved 3-0-1, with Chris abstaining.

December 1, 2015 – On a motion by Chris, seconded by Jeff, Minutes were approved 4-0.

Mike Edgecomb, Director of Government Relations for Time Warner Cable, met with the Committee. Jeff has provided via e-mail a data file of the technical material discussed at this meeting along with an annotated photo from Mike showing a cable “silver box” and cable line at a telephone pole.

Action items:

- Alane will check on whether or not a cable “silver box” (see Jeff’s e-mail of 12/8/15) is on Treasure Point Road – this will determine how far off Route 131 cable is available.
- Jeff will request that another ISP (internet service provider) meet with the Committee in January.
- Ann will talk with the Islesboro Assessor about their broadband plan.
- Ann will determine if cable can come down Scraggle Point Road. (This has been confirmed by graphic provided by Mike Edgecomb.)
- Committee needs true assessment of Town’s needs.

Question: Are complaints about speeds more about what folks are paying for and not the quality of service provided?

Question: Should the Committee request someone with local knowledge (Code Enforcement Officer, Knox County GIS Specialist) chat about what they see as broadband availability and deficits?

A Google Doodle will be sent out to determine when a quorum of Committee members will be available to meet.

Respectfully submitted,  
Ann Matlack

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**January 26, 2016**

### **Internet Service Availability Committee Minutes**

Members present: Jeff Boulet, Betsy Welch, Chris Caffrey and Richard Bates; also present: Suzanne Hoyt.

The meeting was called to order at 6:00pm by the Chairman, Jeff Boulet, with a quorum present.

Based on data from ConnectME and Time Warner Cable, buildings in Town close to the public highways appear to be generally well served with broadband Internet access, although the available service levels are not always understood.

Some fraction of resident on private roads face expensive setup costs and are unserved; however it appears it may be simply a consequence of this privacy.

The committee will investigate if a ConnectME planning grant would help determine both the size of the unserved fraction, and a means whereby it could served.

The meeting was adjourned at 6:55pm.

Respectfully submitted:  
Richard Bates 4/1/2016

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**March 31 2016 Meeting**

### **Internet Service Availability Committee Minutes**

Members present: Jeff Boulet, Susy Ellis, Alane Kennedy, Betsy Welch and Richard Bates; also present: Tim Swigor and Susan Inches.

The meeting was called to order at 6:00pm by the Chairman, Jeff Boulet, with a quorum present.

The committee approved the minutes of the December 7 and January 26 meetings.

Based on its activities over the past months, the committee concluded it had met the requirements laid out in ConnectME's precertification checklist and so was eligible to apply for a Community Broadband Planning Study (CBPS) grant.

Susan Inches from Tilson Technology explained their CBPS would:

- Survey the existing service providers to better understand their plans

- Identify the deficiencies in coverage around the Town
- Propose ways to fill those deficiencies, with cost estimates

Recognizing that this study would yield valuable information about the Town's broadband infrastructure and ways it may be improved, the committee decided to submit a CBPS grant application by the April 15 ConnectME deadline, subject to Select Board approval at their April 11 meeting.

The meeting was adjourned at 7:30pm.

Respectfully submitted,  
Richard Bates 4/1/2016

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### **April 5, 2016 Meeting**

#### **Internet Service Availability Committee Minutes**

Members present: Jeff Boulet, Susy Ellis, Alane Kennedy, Chris Caffrey and Richard Bates.

- The meeting was called to order at 6:30pm by the Chairman, Jeff Boulet, with a quorum present.
- The committee approved the minutes of the March 31 meeting.
- The committee worked assiduously on completing the application for a Community Broadband Planning Study Grant to meet the April 15 ConnectME deadline; this effort included both the grant application itself as well as the pre-certification checklist.
- The application will be jointly together with Tilson Technology as the Town's technical contractor.
- The application will be reviewed with the Select Board on April 11.
- The meeting was adjourned at 8:25pm.

Respectfully submitted,  
Richard Bates 4/6/2016

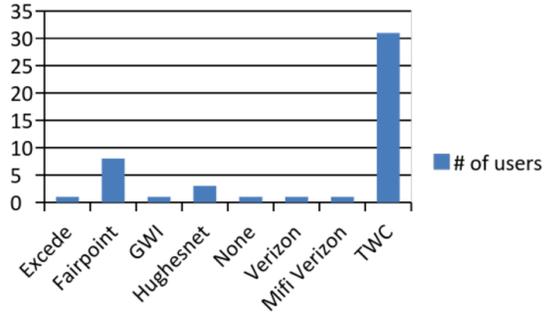
# St. George Broadband Survey

## Most Common ISPs

Based on a year-round population of 3000 residents, less than 2% completed the online survey. Understanding the bias created by using an online survey to identify service issues, these results are not all encompassing of the community.

With a total of 47 submissions the following information was gathered:

TWC (Time Warner Cable) is the most used provider in the area with 65% of participants using their service.



77% of the TWC customers are generally satisfied with their service and connection.

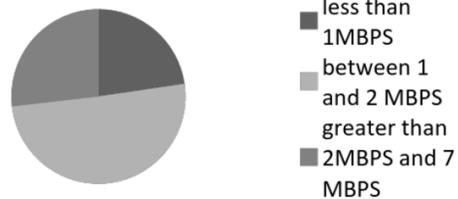
14% of the participants were unable to connect to the Maine.gov website to complete the test.

## Ping

The ping is the reaction time of your connection—how fast you get a response after you’ve sent out a request. A fast ping means a more responsive connection, especially in applications where timing is everything (like video games). Ping is measured in milliseconds (ms). Ping below 100 is good, below 50 is excellent. I think the maximum acceptable value for ping is 150ms.

- 22% of participants able to complete the test have pinged at less than 50ms.
- 60% of participants reported ping between 50ms and 100ms.
- The remaining participants reported pings from 600-800ms. All via Hughesnet and Excede (satellite services?)

## Speed



## Download Speed

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

**1-4 Mbps:** Generally, this is the lowest level of service available in most areas. Email and most web site will load fine and most music streaming services will work without interruption. Internet phone services (VOIP) should have no trouble. But Standard Definition (SD) videos will buffer on occasion.

**4-6 Mbps:** According to the Federal Communications Commission, this is the minimum speed “generally required for using today’s video rich broadband applications and services.” Users at this speed should not have any trouble with streaming audio or video. Service at this speed will allow some file sharing and

should work fine for streaming Internet TV (IP TV).

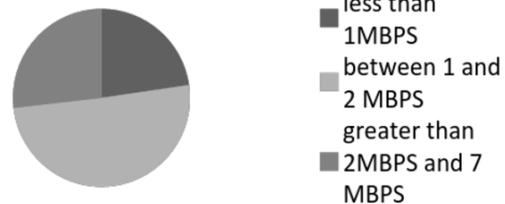
**6-10 Mbps:** For online gamers and heavy video-on-demand, this is the preferred speed. This speed delivers uninterrupted online gaming and smooth on-demand video as long as only one device is using a high bandwidth service.

**10-15 Mbps:** Users at this speed say they do notice the increase in speed. Web sites drop right into the browser and your interaction with web-based applications and cloud services will be much quicker. Will help you interact with more complex online applications like remote education services, telemedicine and high definition Internet TV.

**15-50 Mbps:** If you have a number of devices connected to your network and want to use them at the same time without delays, this may be the speed for you. With the explosion of electronic products that can be connected to the Internet, keeping them all working at peak performance is going to be an increasing challenge. Multiple simultaneous connections will require this level of service.

**50+ Mbps:** Speed like this is not usually seen feeding home networks. The main reasons for such blazing download speed are commercial - video conferencing, real-time data collection and intense remote computing. But again, with the explosion of web-enabled devices in homes, speed like this may someday become the new normal. Remember, we used to access the Internet with dial-up modems.

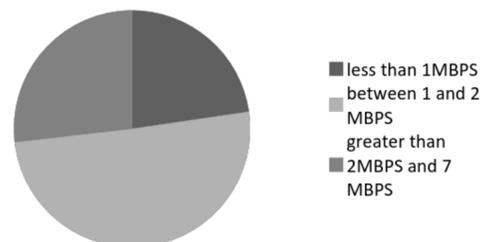
- 20% of participants reported download speeds of 5MBPS or less.
- 23% of participants reported download speeds of 10MBPS or less (majority not time warner).
- 51% of participants reported download speeds of 10MBPS or more (majority time warner).
- Of note, Jackson Memorial Library reports download speeds of 82.18MBPS with Fairpoint fiber optics.
- One resident reports download speeds of 61.53MBPS with Time Warner in St. George.



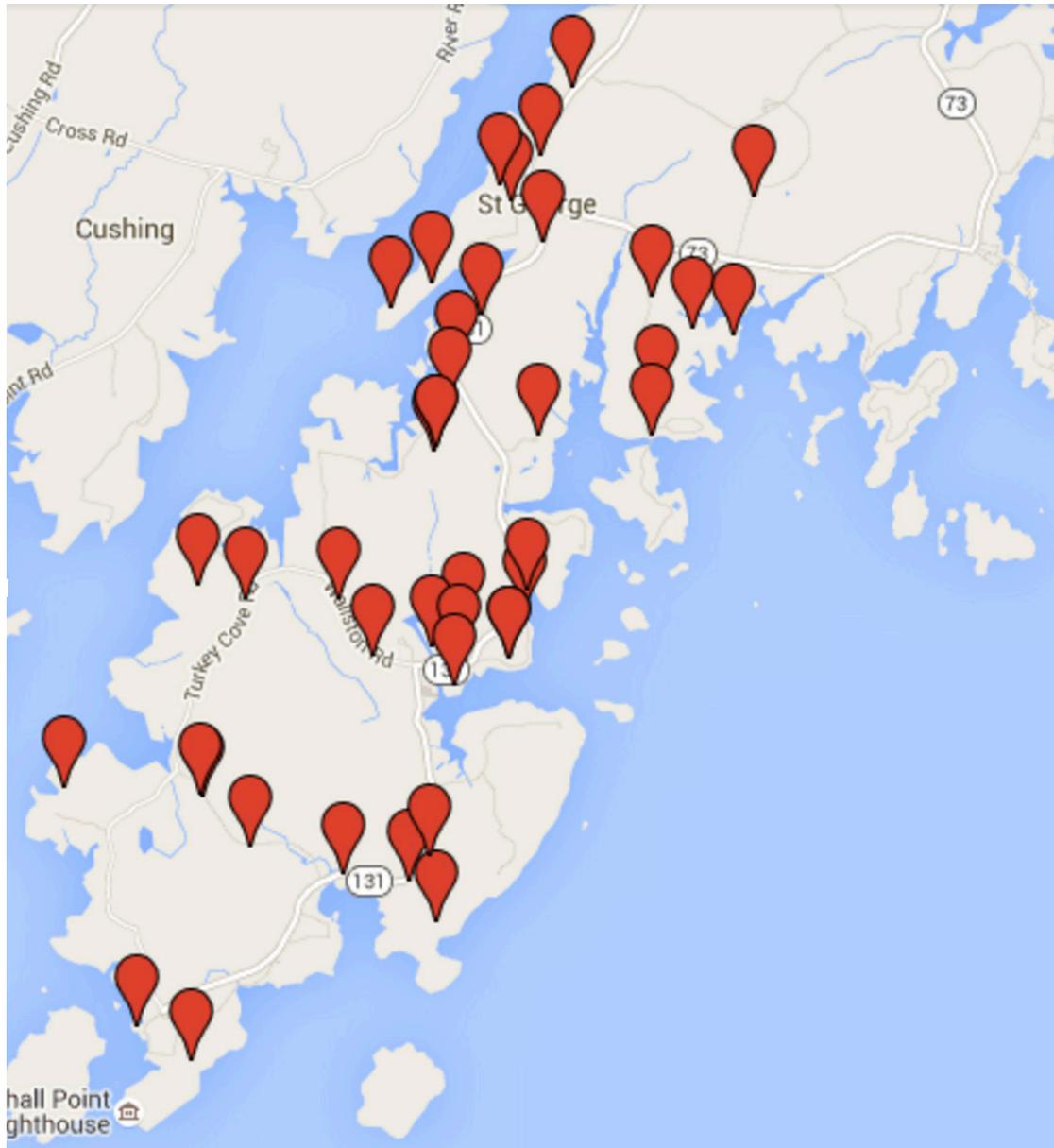
### Upload Speed

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

- 22% of participants reported upload speeds of less than 1MBPS.
- 49% of participants reported upload speeds between 1 and 2 MBPS.
- 26% of participants reported upload speeds greater than 2MBPS and 7 MBPS
- Of note, Jackson Memorial Library reports upload speeds of 36.4MBPS with Fairpoint fiber optics.



Map of the survey area



## Email correspondence

Mike Edgecomb of TimeWarner Cable  
Sent: Wednesday, December 02, 2015 11:01 AM  
To: Edgecomb, Michael  
Subject: Town of St. George Broadband

Hi Mike,

I'm contacting you on behalf of the Town of St. George which includes the villages of Tenants Harbor, Port Clyde, Clark Island, Glenmere and Martinsville.

Lisa Leahy, ConnectME, presented to our group this week and suggested we should contact you first before we do anything else. Are there any evenings next week when you will be available to meet with our group? Next Tuesday at 6pm would work best for us but we'll do what we can to work around your schedule.

Regards,

Jeff Boulet

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On Wed, Dec 2, 2015 at 11:38 AM  
Edgecomb, Michael <michael.edgecomb@twcable.com> wrote:

Jeff

Next Tuesday the 8th at 6PM won't work for me, I have a meeting at the Knox Museum in Thomaston at the same time.

Next Monday-7th, or Thursday- 9th works, or the Tuesday - 15th or Thursday- 17th works on the following week.

Mike

Mike Edgecomb

Director, Government Relations – New England

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From: Jeff Boulet [mailto:jeff.boulet@gmail.com]  
Sent: Wednesday, December 02, 2015 1:35 PM  
To: Edgecomb, Michael  
Subject: Re: Town of St. George Broadband

Hi Mike -

You wrote "Thursday - 9th". Are you available Thursday the 10th or Wednesday the 9th? I'll get back to you today with our group's availability.

Jeff

On Wed, Dec 2, 2015 at 1:38 PM  
Edgecomb, Michael <michael.edgecomb@twcable.com> wrote:

Sorry

I meant Thursday the 10th

All Tuesdays and Thursdays I can do except for Dec 8th

Mike

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From: Jeff Boulet [mailto:jeff.boulet@gmail.com]

Sent: Wednesday, December 02, 2015 2:01 PM

To: Edgecomb, Michael

Subject: Re: Town of St. George Broadband

Hi Mike,

Monday December 7th @6pm works for us. We'll try to keep it to 1 hour in duration. We'll convene at the Library in Tenants Harbor (next to the school).

Is there anything I should know or do in advance to ensure the meeting goes smoothly.

Regards,

Jeff Boulet

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On Wed, Dec 2, 2015 at 2:05 PM

Edgecomb, Michael <michael.edgecomb@twcable.com> wrote:

Jeff

Thanks

That will work.

Are there any specific question that you will have for me?

Mike

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From: Jeff Boulet [mailto:jeff.boulet@gmail.com]

Sent: Wednesday, December 02, 2015 3:14 PM

To: Edgecomb, Michael

Subject: Re: Town of St. George Broadband

Hi Mike,

Our committee's goal is help provide better broadband internet to the entire peninsula. We understand that it won't happen all at once and we know that we'll need technology partners and funding (state/federal grants, etc).

Questions:

- Does TWC plan on expanding service in St. George - if so, where?
- What would it take to make TWC interested in expanding service in our region?
- Do you have any recommendations for us in how we should proceed?

Regards,  
Jeff

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Jeff,

Thanks for meeting with me last evening, I hope I was able to answer most of the questions you may have had. I rode down Clark Island Rd this morning.

The road is completely cabled and the cable splits off into the side roads as indicated on the maps. There is fiber down the road as well, with a fiber node at pole 68. The cable ends at pole 84 – last pole before causeway. The Craginair Inn has cable available as well.

Please let me know if you have further questions

Mike

# Thank you!

Town of St. George, Maine  
Ad Hoc Community Broadband Committee