

The Arrowsic Arrow

News Around & About Arrowsic

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Arrowsic Offered \$1.2 Million USDA Funding to Build Local Broadband Network

If approved by town voters, the combined grant and loan will provide full funding for the construction of a fiber-optic broadband network with speeds up to 100 megabytes per second (Mbps) to all homes in the town. Such a state of the art service will allow town residents to reliably surf the web, email, live stream movies, utilize tele-medicine, do homework and take courses, conduct business, tele-commute, install a low cost internet phone, and receive TV, all over the internet.

Without reliable high-speed internet, people are increasingly reluctant to buy or rent houses on the island, thus high speed broadband will also attract new families, increase house values and rentals, and add to the local tax base.

Most town residents currently receive patchy 1-10 Mbps DSL service from Consolidated, and thus the new network will provide a dramatic improvement to everyone's service at projected costs comparable to or less than the alternatives from Consolidated, RedZone, or Hughes.

The 3 Bridged Islands Broadband Initiative (3BIB) was formed by a group of Arrowsic, Georgetown and Southport residents three years ago to study the poor state of internet service on the three islands. After receiving substantial financial support from the Maine Community Foundation, the Island Institute, and the towns, 3BIB initiated an engineering feasibility study and explored funding possibilities for developing a better network.

They first approached Consolidated, Spectrum, and other local companies that might be interested in servicing the islands, but none were interested in doing so for a rural area with a small population. They then turned to exploring the possibilities of developing our own, locally-owned fiber-optic network.

Activity increased rapidly over the past year as new state and federal funding opened up, including a U.S. Department of Agriculture (USDA) grant and loan program to fully fund construction. Due to complications regarding application procedures, however, only Arrowsic was able to make an application. After approval by the Town Meeting in 2019, 3BIB mounted an extraordinary effort to complete the application in time. With Ken Hnottavange-Telleen focused on the engineering, Don Kornrumpf the financial plans, Will Neilson the legal aspects, and extensive help from the Select Board—Chair Sukey Heard, Bill Savedoff, Michelle Gaillard, Walter Briggs, and Dee Dee Morse—Senator Eloise Vitelli, consultant Alejandra Sulpicio, and others, they successfully put together and submitted a proposal in just two months.

The Selectboard has called a special Town Meeting for Wednesday, January 22nd at 7:00 pm to consider whether the town will accept a \$1.2 million grant and loan from the USDA to construct a broadband system to provide high speed internet to all the homes on the island. We are publishing this special issue of the *Arrow* to explain what is involved. The cost of this special issue has been covered by a grant at no cost to the town.

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With more than 100 other applications for just a few grants, their chances did not appear good, but it was felt that the detailed technical and financial experience gained would pay off when applying for other grants in the future.

Yet, lo and behold, the town received a letter from the USDA on December 9th notifying it that the town's application had been approved, and asking the town to sign an agreement within 60 days.

The network will be owned by the town, either directly or via a town-owned, non-profit corporation. The town or corporation will then enter into contracts with a contractor to construct the system and with an Internet Service Provider (ISP) to manage day-to-day business, including provision and marketing of internet, phone and TV service, billing, maintenance and repair, purchasing of bandwidth, and technical assistance.

The terms will be agreed within an annual budget, with the ISP's net income paid to the town or corporation, less a fixed fair return to the ISP. A bonus system might also be established whereby the ISP would earn an added bonus if it over achieves on the take rate, keeps costs below budget, or provides superior service. The initial contract would be for 3-5 years, at the end of which, both the town and ISP could choose whether to renew the contract. In short, a public-private partnership will ensure that town and community interests are protected.

'There is wide agreement on the need to expand availability of high speed internet access in order for Maine's communities, families and economy to prosper. The proper role of government - at all levels, state, national and local - is to help organize, coordinate and garner the resources to make connection possible. I applaud the efforts of community members who have done their part to move broadband forward!'
(Sen. Eloise Vitelli, Arrowsic)

The system will be self-financing, with all costs borne by subscribers and none by the town or non-subscribers. The USDA grant and loan will fully fund construction. Monthly subscriber fees will cover all loan repayments, maintenance, and operating costs.

If as few as 25% of residents subscribe, the town or corporation will be able to fully service the debt incurred to build the network and provide some contingency reserves. But if, as expected, more residents subscribe, the network will generate a positive cash flow, the loan can be repaid more quickly, subscriber fees can be reduced, the reserve fund can be increased, and any surplus can be returned to the town.

Proposed subscriber fees will be competitive with current suppliers. Different levels of service may be provided to ensure that everyone can gain access. No one will be required to sign-up, and non-subscribers will pay nothing.

The new network will also be able to provide phone service and television for modest additional fees, thus allowing people to drop current landline and satellite services.

To find out more, come to an information session on Jan 15th at 7:00 pm or on Jan 18th at 1:00 pm at the Town Hall. And most importantly, come to the Special Town Meeting to vote on accepting the USDA grant and loan to bring high-speed broadband to Arrowsic at 7:00 pm on Wednesday, January 22nd at the Town Hall.

—Tom Spear

**Special Town Meeting
to Vote on Local Broadband
Wednesday, January 22nd at 7:00 pm
Town Hall**

Other Towns Developing Local Broadband Systems

Arrowsic is not alone in suffering from inadequate or non-existent internet service. Much of rural Maine is similarly deprived, since commercial providers are reluctant to service small rural areas.

As a result, the state has taken the lead in developing the major fiber-optic highway (known as the Three Ring Binder) that circles the state. The legislature also recently passed a bill eliminating the substantial fees charged by existing utilities for use of their poles by municipal broadband. And it is considering a \$100 million bond issue to finance the development of internet in underserved areas. The federal government is also allocating more funds for rural internet.

The Island Institute and the Maine Community Foundation have taken the lead in providing leadership and funding for towns seeking to develop their own broadband networks. Citing the need for reliable high-speed internet access for business, community services, and telecommuters, the Island Institute has led in facilitating local broadband development along the coast, funding a thirteen island feasibility study in 2015 and convening annual broadband summits thereafter.

'Broadband is critical to enriching and increasing our workforce, from remote work opportunities to greater educational resources for our young people. It's as important as roads and infrastructure are to our economy.' (Rep. Allison Hepler, House District 53)

Several other communities are also exploring and developing their own broadband systems. Islesboro, with a population of 550, was the first island community to achieve this. After local residents collected private donations and municipal funds to conduct their initial feasibility study, the town voted to develop a municipally financed and operated system. It was financed with a \$3 million bond issue, repayable by the town from property taxes, and construction was completed in 2016.

Cliff Island has also constructed its own publically owned system. Local residents first began to explore the options for bringing internet to their island in 2015, and after exploring a number of private and public options, they chose to establish a privately financed, publically owned corporation, Cliff Island Fiber (CIF). Partnering with Axiom, CIF began to construct its system in late 2018, and a year later it was up and running with 80 initial subscribers.

Other towns are following suit. The Cranberry Isles and Great Diamond Island have both developed systems, and Chebeague, Long Island, North Haven, Vinalhaven, Swan Island, Roque Bluffs, Sanford, Old Town/Orono, and five towns in central Maine are all now in the process of exploring and developing systems of their own.

Meanwhile, municipalities and cooperatives across the country are developing their own local broadband systems, replicating the extensive development of rural electrical and telephone cooperatives in the 19th century. Spurred on by newly available state and federal funding, over 800 municipally or cooperatively owned local broadband systems are already up and running, and more are coming on line daily.

Arrowsic has been lucky to come along after many of the earlier barriers to the development of local broadband have dropped. While most communities that started earlier depended on private and municipal funding to conduct their initial studies, the 3BIB Task Force was able to get substantial grants from the Maine Community Foundation and Island Institute to help pay for its preliminary studies and grant application.

Arrowsic has also now been offered very favorable federal support to fully finance the system's construction, thus eliminating the need for private investment or raising property taxes to pay for it. And Arrowsic will be able to partner with several local companies that have gained the expertise to construct and operate local broadband.

—Tom Spear

The Proposal in Brief

The Town Meeting will be asked to approve the town borrowing up to \$604,254 for 22 years at the Treasury rate from the Rural Utilities Service of the USDA to build a fiber optic broadband network to every residence in Arrowsic that desires it; and to accept a grant from the same source of up to another \$604,254 to cover the balance of the capital cost above loan.

The town will own the network, but will contract its operation to a third party Internet Service Provider for a period of years and on terms to be negotiated. Subscription fees will probably be less than \$70/mo. for a basic download speed of 25 Mbps and upload speed of 4 Mbps (vs. maximum of 10/1 Mbps available currently), \$80/mo. for 50/10 Mbps, or \$110/mo. for 100/25 Mbps.

Subscription revenue is projected to cover debt repayment, operating costs, and reserve funds, at no increase in the mil rate for the town taxpayer. If subscription revenue exceeds expectations, costs are on budget, and adequate reserves have been made, the debt may be repaid early, new services added, or subscription fees reduced.

Given the USDA offer of a very low interest rate on a long term loan combined with a grant of up to 50% of the capital cost, Arrowsic gets the project built at a discount of up to 50% with no money down and repayment terms that are much more favorable than any available elsewhere in the public or private financial markets – the interest rate is approximately half of commercial rates and the amortization period is one and a half to twice as long as others.

The terms available under this USDA program are far and away the best available to bring modern internet infrastructure to Arrowsic. If our community wants that infrastructure, then this program is absolutely the best option available.

—Will Neilson

Q & A on High Speed Internet

What is high speed internet?

The national standard for high speed internet is currently defined as download speeds greater than 25 Mbps and upload speeds greater than 3 Mbps. These speeds will carry all internet services needed by residents, small businesses, and emergency services. No addresses in Arrowsic have these speeds and most are far lower, while the proposed network will provide speeds up to 100/100 to every home.

What difference will there be compared to Consolidated (Fairpoint), RedZone, and other services?

The proposed system will be faster and much more reliable than what is offered by Consolidated, RedZone, or satellite providers now. Consolidated only offers DSL service utilizing their aging copper network, which cannot provide services much in

excess of 10/1 Mbps. Cable is not expanding to Arrowsic and there is little prospect of 5G cellphone service reaching Arrowsic any time soon, given the priorities investors would require.

What specific services and options will be available?

The basic service will include a reliable internet connection with fast download and upload speeds, and several email addresses/boxes (if desired). The basic connection will give access to any content or website that is freely available anywhere on the internet. Extra-cost options – available either directly from our chosen ISP or subscribed through the internet – will include higher speeds up to 100/100 symmetrical service, phone service (local and/or long distance) to replace your landline, TV to replace satellite, movie streaming, health and home monitoring, education, security, and others.

How will this high-speed internet system impact the community and my property value?

Nationally, in Midcoast Maine, and specifically in Arrowsic, real estate agents are clear that the availability of high speed internet is a very important factor now for those buying, building, or renting a home. High speed allows more residents to work from home, manage a business, and stay connected. A ‘connected community’ will increasingly be more sought after than communities with poor connectivity.

What will a subscription cost per month and what are the terms? Rates are being targeted at slightly under the current Consolidated rates for all services. Services will be subject to a one-year contract payable monthly. Importantly, Arrowsic Broadband Network will cover the connection costs for households who sign up during the first year of operation.

Who will run the system and why is the town involved?

The town is involved because without town support no private provider will build a broadband network on Arrowsic. We are seeking a public-private partnership, where we will contract with an Internet Service Provider (ISP) to run the network on a day-to-day basis. The town will own the infrastructure and have the power to determine services and pricing and to exercise oversight over the ISP. If the town sets up a subsidiary authority or corporation to oversee day-to-day activities, the town (through the Select Board and the voters) will still have the ultimate say on how the system is run. The town (or its subsidiary authority) will hire experienced reputable firms to construct and operate the system.

What will the system cost and how long will it take to install and be usable?

The USDA grant/loan offer was based on a preliminary construction estimate of \$1.2 million generated through our earlier RFP process. It is estimated the system will take 9 to 15 months to complete.

When will the network be installed and up and running?

If Arrowsic accepts the USDA grant/loan in January, construction must start within 180 days.

Construction may be completed and operations begin as early as Fall 2020.

Has the construction and Internet Service Provider (ISP) been put out to bid?

An RFP was issued in 2018 for both parts. Bids were received and used in our application. While likely providers of each service have been identified, USDA rules may require re-bidding the construction.

How will the Contractor and ISP be chosen?

Given the USDA grant/loan offer is expected to cover the total construction cost, the most important selection criterion for a construction contractor is expected to be the quality of the built system. Similarly, given an expected high ‘take rate’ and positive effect on town revenues, the most important criterion for selecting a system operator will be expected reliability of service and cost control.

How will the construction and service be financed?

The USDA is offering to fund 50% of the construction cost as a grant and 50% as a loan at a very low interest rate. As the lender, the USDA requires the town to provide financial security. The town will grant a security interest in the network and repay the loan from subscribers’ fees. Financial projections show that if as few as 25% of households subscribe, their fees will more than cover the loan payments. But if 50% subscribe, as expected, the fees will generate a surplus that can be used to pay off the loan more quickly, increase services, reduce fees, or return a surplus to the town. Ultimately, though, the town’s credit is backed through its taxing authority, and in the unlikely event that the fees do not fully cover the repayments, the town would be required to make up the shortfall through tax revenues.

What are the terms and conditions of the USDA grant/loan offer? The loan is for 22 years with no payments of principal or interest for the first 3 years at a rate currently about 2.1%.

How does the agreement restrict the town?

USDA presents a fairly tight agreement that monitors construction procedures and funding drawings. It also takes a security interest (akin to a first mortgage) on the network’s assets.

Cash flow permitting, can the loan be prepaid?

Yes, and we well might do so, but we would probably use surplus cash to provide special services, such as tele-health or education, or reduce fees.

What will be the town’s liabilities and financial risks?

The Town will have certain performance risks under the loan agreement, mainly reporting, maintaining insurance, and keeping the network in good repair. Financially the town will be obligated to repay the 2.1% \$604,205 loan over 22 years. In an absolutely worse case scenario, where the town would have to borrow the full amount to repay the USDA, the increase in property tax on an average property assessed at \$312,000 would be about \$141 per year.

Will there be an impact on the town’s credit standing?

Provided that the loan payments are made as specified by the USDA, the impact on the town’s credit standing will be neutral to positive. The \$604,000 grant money in effect provides added capital to the town’s balance sheet currently showing about \$1,287,000, almost a 50% increase. In the unlikely event of late payments or the very unlikely event of default, the impact would be negative.

What do you see as the biggest risk in this investment?

The ‘take rate’. Everything hinges on the number of subscribers. Our financial projections indicate a

break-even rate of about 25%, and we are confident that we as a community can do far better.

What is the best-case scenario?

The best case scenario is a high take rate, which would generate excess cash flow that could be used to prepay the loan faster, reduce subscription rates, offer added services for say tele-health and/or education at low cost, or return a surplus to the town. We expect an initial take rate of 50%, which is close to other Maine communities and would readily repay the loan and maintain the network.

What happens if the system suffers storm damage?

Both the system operator (ISP) and the town’s operating entity will carry insurance from highly rated insurers to cover risk and repairs in case of calamity.

What will be the relationship to the broadband activities of Georgetown and other towns?

Arrowsic and Georgetown have been working together on broadband for several years. Georgetown’s efforts continue and they plan to apply for a grant in February. As currently planned and funded, the Arrowsic system will not depend on Georgetown or any other community. Our hope is that when Georgetown constructs a similar fiber-based internet system, the two systems would be operated by a single ISP leading to reduced cost, shared maintenance, and lower subscriber rates. We plan to continue to coordinate our efforts going forward.

—Don Kornrumpf & Ken Hnottavange-Telleen

Want to Know More?
Come to an Information Session on High-Speed Broadband
Wednesday January 15th at 7:00 pm
or
Saturday January 18th at 1:00 pm
Town Hall

The *Arrow* is the free independent town newsletter published 3-4 times a year. If you would like to receive it regularly by email, please send your **name, address, and email address** to admin@arrowsic.org. The email list is maintained by the town and will only be used by the town to communicate with residents.

Arrowsic Residents Sound Off on Broadband

‘I have been a real estate broker and selling properties in Arrowsic for 32 years. Over the years the demand for high speed internet has increased. Folks viewing a property used to ask how much the taxes and heating costs were. Now they ask what the internet speed is and if there is high-speed cable. I have to answer ‘no’ because it affects their decision to buy a home and is a disclosure issue. Many people have lost a sale because of buyers needs or wants, and the longer a property stays on the market, the lower the sales price a seller will likely receive for their property.’ (Andrea Galuza, Bald Head Road)

‘The Select Board continues to be concerned that we are not getting reliable cloud backups performed regularly on our municipal database by an outside service provider because of intermittent connectivity issues.’ (Sukey Heard, Chair, Select Board, Old Stage Road)

‘Not having access to a strong and reliable connection limits students ability to do in depth research and use apps like Google. In high school nearly all assignments and projects are completed online. Having access to broadband allows students to collaborate with each other and receive feedback or help from teachers. Access to high speed internet at home will also be helpful to students wishing to access advanced course work online, additional help in areas they may be struggling in, and managing the college exploration and admissions process.’ (Anita Brown, RSU representative)

‘As a business owner operating a website from home, I have struggled with sub-standard internet service. Download speeds at 10 Old Stage Road average 10 Mbps and our upload speed is less than 1 Mbps. Since we regularly upload large, high-resolution and then review them online, the long upload times are frustrating and constitute a serious drag on our productivity. And interruptions occur quite regularly due to higher usage in the area than DSL can handle. The prospect of broadband coming to Arrowsic is an exciting one indeed, promising great benefits not only to those like me who work from home, or might one day, but for every

household in town. I urge all to attend the town meeting and vote to accept USDA funding.’ (Jim Arsenault, Old Stage Road)

‘Older people with chronic illness often have difficulty travelling to medical facilities. Tele-medicine allows patients to be monitored in their own homes and check in daily to their providers with the results of their blood pressure, pulse, weight, etc. transmitted via the internet. Consultation with specialists who otherwise would not be accessible is being done via the internet as well. Tele-medicine will help many age in place, but residents in Arrowsic will need adequate broadband to participate.’ (Norma Dreyfus, MD, Indian Rest Road)

‘As a serial volunteer who is often asked to work with web-based member managements systems to maintain websites and social media accounts, I am frequently frustrated by crawling upload speeds. The proposed upgrades for Arrowsic are needed and will be appreciated.’ (Don Hudson, Mosquito Run)

‘Mark Aukeman and I both rent office space in Bath and Brunswick (respectively), in part because internet at home is not adequate to support business use. Obviously that expense is much greater than the fastest internet + phone + TV package! Giving up the separate office space will save me \$530/month, plus some commute miles.’ (Ken Hnottavange-Telleen, Collins Pattee Road)

I work for National Geographic Learning creating online educational tools for elementary children to learn English. The majority of the teaching strategy is video-based. Without high-speed internet, students are at a great disadvantage not being able to stream crucial instructional videos. (Dena Bachman, Bald Head Road)

‘Seems to me that without accessible, fast broadband our property and homes will be very difficult to sell when the time comes. It also will be difficult to participate in the real world from our left out island. No adequate broadband, no future.’ (Bob Kalish, Newtown Road)

Once part of Massachusetts, Maine became independent 200 years ago in March of 1820. Let's bring Maine200 to Arrowsic with a community event during the official Statehood Weekend: Saturday, March 14, 2020. Maine's Bicentennial Commission is supporting local activities in many different ways. Check out <https://www.maine200.org>

Help us to shape the Arrowsic celebration
Bring your ideas to an open meeting
at the Town Hall
at 6:00 on Tuesday, January 14, 2020
to brainstorm and plan our own Arrowsic event.

Contact Sheila Spear (admin@arrowsic.org) or Karin Sadtler (kasadtler@yahoo.com or 442-8042)
if you are coming or want to make some suggestions for activities

Town History Series

The Sagadahoc History and Genealogy Room announces its annual Town History Series
Saturdays at 10:30 at the Patten Free Library.

January 18: Matthew Caras, 'Arrowsic's Intertidal Zone: A Historical Perspective'
January 25 Rob Stevens, 'Woolwich Soldiers and the 1775 Benedict Arnold's Expedition to Quebec'
February 1: Don Bruce, 'What's in a Name? An Historical Perspective of Place Names in West Bath'
February 8: Georgetown: "Captain Stin Davis... in his own words"
February 15: Chris Timm, 'Bath's Ship-Owning Princes'

The Arrowsic Arrow is Arrowsic's independent newsletter, produced through the efforts of volunteers. The newsletter is published three times a year in March, July, and November. The Arrow is primarily distributed via e-mail to all those on the Town of Arrowsic email list or on paper to those who are unable to access them online. The Town covers any costs for paper and postage. All articles and notices are welcome. Notices should be limited to 100 words. The Arrowsic Arrow Editorial Group: Bob Kalish, Karin Sadtler, and Tom Spear. Contact: Tom Spear, tspear@wisc.edu, 386-1475

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