



# Town of Cranberry Isles RFI

Broadband Solution for Three Unbridged Islands

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January 16, 2017

Redzone Wireless, LLC  
91 Camden St. Suite 404  
Rockland, ME 04841

Denise McCormick, Town Clerk  
Town of Cranberry Isles  
P.O. Box 56,  
Islesford, ME 04646

To the Town of Cranberry Isles:

Thank you for considering Redzone as a partner for the next generation of broadband connectivity to the Cranberry Isles. The existing infrastructure that has served the island of Islesford for over 5 years is in need of an upgrade to meet the growing demand for internet connection speeds. While the Islesford network equipment has not been regularly updated, Redzone has kept up with the rapid pace of change in other areas of Maine and has recently announced the launch of our 5Gx network, delivering performance of up to 100Mbps. Redzone continues to be a unique broadband provider candidate to play a role in the Cranberry Isles internet service for the next 5 years.

Having completed construction of several broadband connections and networks on multiple islands along the coast of Maine, we suggest that a hybrid solution is the most ideal solution for your needs. Redzone is best suited to provide the broadband delivery and backhaul to the islands, partnering with another provider who can deploy a fiber network to connect the residences and businesses on the island.

The details of our proposal and responses to your questions are included in the following document.

Sincerely:

Jamie Bloomquist  
Senior Manager, Business Development  
Redzone Wireless, LLC  
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207-593-7292

## **6.1 - COMPANY INFORMATION & EXPERTISE**

Redzone Wireless, LLC, a team of 25 employees located in Rockland Maine, was established in 2014 to build a next generation fixed wireless broadband network within the state of Maine. Redzone Wireless, LLC acquired Redzone Wireless, Inc. a wireless internet service provider, founded in 2009, that provided unlicensed pre 4G LTE wireless internet services in Midcoast, Bangor, and Downeast Maine including Islesford. Our 4G LTE Advanced network, launched in June of 2015, operates on FCC licensed Educational Broadband Service (EBS) spectrum. We introduced a multi-spectrum commercial and municipal wireless broadband network for Maine communities and businesses in 2016.

Since June of 2015, we have greatly expanded our coverage to over 100 Maine communities, covering 225,000 Maine households and more than 40,000 businesses across the state. We have deployed two powerful, state-of-the-art broadband networks in the state of Maine. Each new site we deploy incorporates both 4G LTE operating on Redzone's FCC licensed 2.5 GHz spectrum, and the new 5 GHz technology, providing us with the capability to offer fast and affordable broadband services for any customer, business or residential.

In August 2016, Redzone completed the acquisition of GWI's (Biddeford Internet Corporation) wireless Internet network assets which serve residential and commercial customers primarily in Maine's Midcoast region and numerous Penobscot Bay coastal and island communities.

### **LEADERSHIP & TECHNICAL EXPERTISE**

Redzone Wireless CEO Jim McKenna holds a Bachelor of Science Electrical Engineering degree from the United States Naval Academy, and he served as an officer in the US Navy (Submarines). Jim has over 22 years of leadership and business experience in highly technical environments. He has founded two telecom startups, and held senior management positions in leading telecommunications services firms.

Burton Wilcox, Network Development Manager, has over 10-years experience developing wireless broadband infrastructure projects throughout Midcoast Maine and Island communities.

### **Redzone Unique Advantages**

- Existing infrastructure in Southwest Harbor that can be easily upgraded
- Wireless speeds and capacity will continue to increase
- Experience operating FCC licensed and unlicensed multi-spectrum fixed wireless and point to point transmission networks and systems

## RURAL AREA EXAMPLE

Redzone Wireless provides 4G LTE broadband internet service to approximately 100 residents on Great Diamond Island, in Casco Bay Maine, delivering up to 20 Mbps download, and 2 Mbps upload. Redzone delivers the bandwidth via a wireless backhaul from a tower in downtown Portland to equipment installed on a water tank on Great Diamond Island. The water tank was chosen to reduce up-front capital costs.

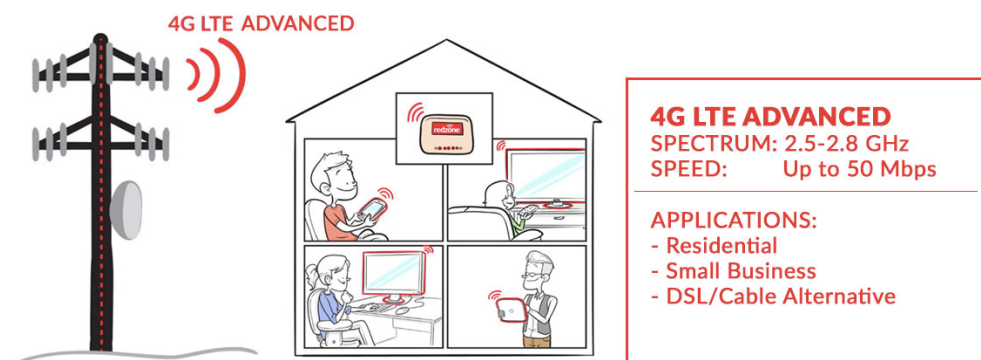
Another example of our ability to deliver high-speed connectivity to an island community is our project on Squirrel Island (Boothbay Harbor Region) currently under construction. From a mainland based fiber connected tower location, Redzone delivers high capacity wireless backhaul to the island, feeding a FTTP network connecting 100 homes with available speeds up to 100 Mbps. The island based tower also serves as a wireless distribution site to additional unserved coastal communities.

## 6.2 - SERVICES OFFERED

Redzone's 5Gx combines both FCC licensed 4G LTE and unlicensed wireless broadband technologies on a single tower, and integrates them with a proprietary operational support system (OSS). This strategy maximizes bandwidth availability on a per site basis, affording Redzone the capability to service more customers from each site, and at faster speeds than LTE alone can provide. By integrating the technologies onto a common OSS Redzone gains operational efficiencies through spectrum aggregation, including the capability to migrate customers seamlessly between the wireless platforms.

## 4G LTE ADVANCED

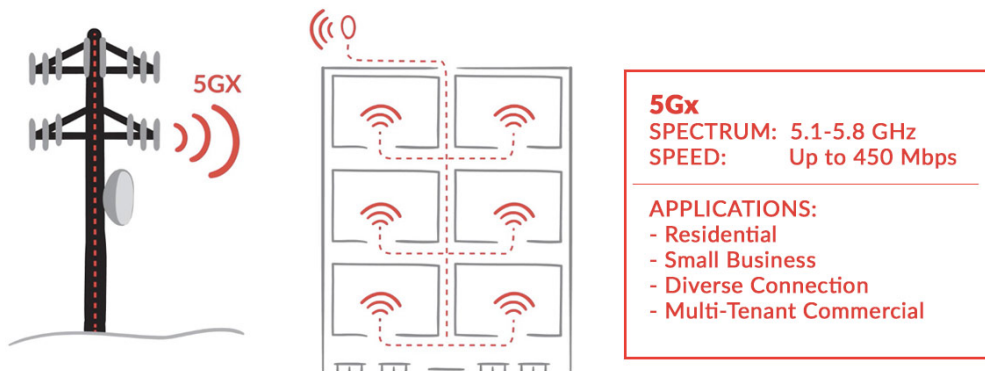
Redzone is the only Fixed Wireless Internet provider to use 4G LTE Advanced in the state of Maine, and is committed to delivering all of the speed and benefits of LTE Advanced, as they become available, to Maine residents and businesses.



4G LTE Advanced plans are affordable, and provide enough speed and bandwidth for everyone in your household to stream music, movies and TV shows, to shop online and to stay connected with friends on multiple devices.

## 5Gx

Our 5Gx network offers bandwidth to handle multiple connected devices for cloud-based applications, sharing large files, video conferencing, and more. Our 5Gx Max plan provides symmetrical 100 Mbps upload and download.



### 6.3 - Customer Installations

As Redzone is not proposing to act as the internet service provider, the discussion of the ISP business model is specifically not addressed in this RFP response.

### 6.4 - Customer Service & Marketing

As Redzone is not proposing to act as the internet service provider, the discussion of customer service and marketing is specifically not addressed in this RFP response.

## 6.5 - PLAN TO MEET THE OBJECTIVE

Redzone proposes the construction of a tower on the island of Islesford that would be approximately 80-100ft. (mobile or fixed structure). The P2P microwave transmission equipment will be installed on the the Islesford tower. The tower will also be designed to support and install wireless point to point transmission equipment to deliver a broadband connection to the adjacent islands (Sutton Island, Great Cranberry Island) in 2018.

Estimated One Time Expense	Vendor	Estimated Cost
Site Selection / Acquisition	Town of Cranberry Isles	TBD
Tower (Site prep, construction, labor)	Redzone	\$54,000
Backhaul Equipment	Redzone	\$30,000
Fiber to the Home Network	TBD	\$900k - \$1.1mil *
Head End Equipment	TBD	\$170,000 *

\* Based on data provided in the Nov 2015 Broadband Study completed by Tilson

Estimated Monthly Expenses	Vendor	Estimated Cost
Wireless Backhaul, 1 Gigabit Link (Maintenance, monitoring, mainland tower lease)	Redzone	\$1,200/month
Fiber Transport (Demark Southwest Harbor)	Redzone or Fairpoint	TBD
ISP	TBD	TBD

### INFRASTRUCTURE ASSETS - REDZONE

Redzone has an agreement to install transmission equipment in Southwest Harbor to deliver the 1Gb connection to Islesford.

### INFRASTRUCTURE REQUIREMENTS - TOWN OF ISLESFORD

The town must provide location and access for tower construction on Islesford, and access to structures for installation of point-to-point transmission equipment on both Great Cranberry Island, and Sutton Island. As previously noted in this RFI submission, an alternate, non-Redzone vendor would act as the ISP responsible for delivering the high-speed broadband service and customer premise equipment to each household on the islands via a FTTP or alternate network.

## PROJECT TIMELINE

Redzone can install and activate a wireless backhaul within approximately 180 days from completion of the detailed proposal.

## 6.6 - BUSINESS MODEL

As Redzone is not proposing to act as the internet service provider, the discussion of the ISP business model is specifically not addressed in this RFP response.