



## AMATEUR RADIO DIGITAL COMMUNICATIONS

5663 Balboa Ave • Suite 432 • San Diego, CA 92111-2705 • USA

### GRANT AGREEMENT

#### LARGE GRANTS, US 501(c)(3)s

This Grant Agreement (this “Agreement”) is made by and between Amateur Radio Digital Communications, a California private foundation (“ARDC”), and Cascade Amateur Radio Society dba Oregon HamWAN, a 501(c)(3) organized under the laws of the United States, (“Grantee”), effective as of June 1, 2021 (the “Effective Date”).

#### GRANT DETAILS

Grantee Organization: Cascade Amateur Radio  
Society dba Oregon  
HamWAN

EIN 46-0476753

Amount of Grant: \$88,391.00

Grant Start Date: June 1, 2021

Grant End Date: December 1, 2022

#### RECITALS

A. ARDC is organized and operated for charitable, educational, and scientific purposes within the meaning of Section 501(c)(3) of the U.S. Internal Revenue Code of 1986, as amended (“IRC”), and more specifically, to serve and promote the interest of scientific research, experimentation, and open access for its community constituents and other

partners with expanding the Amateur Radio Digital Communications network. ARDC is classified as a private foundation under IRC Section 509(a).

- B.** Grantee is organized and operated for charitable, educational, and/or scientific purposes within the meaning of IRC Section 501(c)(3).
- C.** ARDC wishes to make a grant to Grantee, subject to the terms and conditions stated in this Agreement.

NOW, THEREFORE, the parties hereby agree as follows:

## **AGREEMENT**

- 1. Grant Amount and Purpose.** Subject to the terms and conditions stated herein, ARDC agrees to grant to Grantee **\$88,391.00** payable in U.S. Dollars (the “Grant”). The Grant is being made for the purpose of providing support for the **The Oregon HamWAN Backbone Project 2021** of Grantee, which which is a set of activities as outlined in the proposal received on **April 30, 2021** - which, along with any amendments, is attached to this Agreement (the “Grant Purpose”). The Grant will be disbursed in a single installment upon receipt by ARDC of a signed copy of this Agreement.
- 2. Grant Period.** The Grant is to be expended in full by Grantee in furtherance of the Grant Purpose between June 1, 2021 and December 1, 2022 (the “Grant Period”).
- 3. Use of Grant Funds.** Grantee shall use the Grant funds only for the Grant Purpose described above, shall treat the Grant as restricted for the Grant Purpose, and shall repay to ARDC any part of the Grant that is used for any purpose other than the Grant Purpose, unless ARDC provides prior written consent for such use. Grantee is solely responsible for: (i) all activities supported by the Grant, (ii) the content of any product or service created with the Grant, and (iii) the manner in which such products or services may be disseminated.
- 4. Reporting.** Grantee shall make written or phone-based reports to ARDC which shall be submitted every six (6) months following the Grant Start Date and a final written report within 60 days of the completion of the Grant or the Grant End Date, whichever is sooner. Should Grantee wish to request an extension of time to submit the report, Grantee will speak with ARDC regarding such request before the specified due date. Grantee shall maintain a complete and accurate record of the Grant received and expenses incurred pursuant to this Agreement, and shall retain such books and records for at least four (4) years after the end of the Grant Period. A Grant Report Worksheet – which contains all of the information necessary to receive in the Reports – follows this Agreement in [Exhibit A](#).

- 5. No Earmarking for Lobbying.** This Grant is not earmarked for carrying on propaganda or otherwise attempting to influence legislation within the meaning of Internal Revenue Code (“IRC”) Section 4945(d)(1) (“Lobbying”). ARDC and Grantee acknowledge and agree that (i) there is no agreement, oral or written, that obligates Grantee to use Grant funds for Lobbying, and (ii) any use of Grant funds by Grantee for Lobbying constitutes a decision of Grantee that is controlled by Grantee and made completely independently of ARDC.
- 6. Prohibited Uses.** Notwithstanding anything to the contrary of this Agreement or any other documents relating to the Grant, Grantee shall not use any portion of the Grant for any of the following purposes: (i) to influence the outcome of any specific election for candidates to public office, or to carry on, directly or indirectly, any voter registration drive, within the meaning of IRC Section 4945(d)(2); or (ii) to undertake any activity for any purpose other than a charitable, scientific, religious, literary, or educational purpose within the meaning of IRC Section 170(c)(2)(B); or (iii) , to cause any private inurement or improper private benefit to occur; or to take any other action inconsistent with IRC Section 501(c)(3).
- 7. Termination.** If ARDC determines, in its reasonable discretion, that Grantee has failed to comply with or otherwise breached any term or condition of this Agreement or that the Grant Purpose has been jeopardized, ARDC may, upon written notice to Grantee, withhold further Grant payments to Grantee and/or terminate the Grant. Upon any termination of the Grant, ARDC may demand the return of all or part of the Grant funds remaining in Grantee’s possession or control and/or the Grant funds spent in violation of this Agreement. In the event of such demand, Grantee shall immediately repay the requested funds to ARDC. ARDC shall have no liability to Grantee as a result of termination of this Agreement in accordance with this Section. The rights and obligations of the parties pursuant to Sections [4](#), [5](#), [6](#), [7](#), [10](#), [11](#), [12](#) and [13](#) shall survive the termination, rescission, or expiration of this Agreement.
- 8. Grantee Representations, Warranties, and Covenants.** Grantee represents and warrants that it is an organization exempt from federal income tax under IRC Section 501(c)(3), and that it is classified as a public charity for federal income tax purposes. Grantee further represents and warrants that it possesses, or will possess, all governmental franchises, licenses, certificates, permits, authorizations, and approvals necessary for it to perform its obligations under these Terms. Grantee agrees to comply with all applicable laws, ordinances, and regulations during the Grant Period.
- 9. Notice of Changes.** Grantee will notify ARDC immediately of any change in (i) Grantee’s legal or tax status; (ii) the name, address, phone number, or email of Grantee

and/or Grantee's primary contact person; and (iii) circumstances that may significantly affect or impact the operation of the project or the carrying out of the Grant Purpose, including changes in executive leadership.

**10.Publications, Public Rights, and Acknowledgement.** All publications, studies, research, performance, art, software, web pages, or other final product funded by this Grant shall be made available to the public using a license approved by the Open Source Initiative or a Creative Commons CC-BY or CC-BY-SA license or the CC0 dedication. Any patent applied for or issued based on the activities funded by this Grant shall be licensed to the public at no cost and with no restrictions. All such publications and public rights disclosures shall include the following acknowledgment: "Supported by a grant from Amateur Radio Digital Communications."

**11.Publicity.** Grantee may refer to ARDC's name when identifying its donors and supporters in public forums and when publicizing this Grant and is not required to obtain ARDC's prior consent in doing so. Grantee acknowledges that ARDC shall have the right to use the name and logo of Grantee in relation to this Grant and to refer or link to Grantee, its website, and the Grant in its reasonable discretion in any press release, website, or other public document or announcement, including without limitation, in a general list of ARDC's supported organizations, in ARDC's Form 990-PF, and as otherwise required by law. Any right granted to ARDC or Grantee to use the other party's logo or any other trademark shall be revocable, non-exclusive, and non-transferable, and such party agrees to use such logo or trademark only in accordance with any trademark usage guidelines that the other party may provide from time to time. Each party agrees, upon request, to provide samples of such party's usage of the other party's logo or trademarks, and each party agrees to terminate usage of any such logo or trademark if such usage fails to meet the other party's trademark usage guidelines, if any, or otherwise upon the other party's reasonable request.

**12.Relationship of the Parties.** This Agreement shall not be construed as creating an agency, partnership, joint venture, or any other form of association, for tax purposes or otherwise, between the parties, and Grantee shall make no such representation to anyone.

**13.Governing Law; Venue.** This Agreement shall be governed by and construed in accordance with the laws of the State of California, without reference to its conflict of laws provisions. The parties agree that San Francisco, California shall be the venue for any action or proceeding that may be brought under, or arise out of, in connection with, or by reason of, this Agreement. In the case of any such action or proceeding, each party shall bear its own respective related costs, expenses, and attorneys' fees.

**14.Notice.** Any notice or other communication pursuant to this Agreement shall be in writing and shall be sent to the following persons as set forth below (or to such other address or contact information as may be designated by a party by giving notice to the other party):

To Grantee

**Oregon HamWAN  
102000 SW Kathrine Street  
Tigard, Oregon  
503-544-7945  
lawtolliver@gmail.com**

To ARDC

Amateur Digital Radio Communications  
Attn: Grants Dept.  
5663 Balboa Ave, Suite 432  
San Diego, CA 92111  
[giving@ampr.org](mailto:giving@ampr.org)

**15.Severability.** If any provision of this Agreement shall be held by a court of competent jurisdiction to be invalid, void or otherwise unenforceable, such provision shall be enforced to the maximum extent possible so as to effect the intent of the parties, and the remainder of this Agreement shall remain in full force and effect.

**16.Assignment; No Third Party Beneficiaries.** Grantee shall not and shall not have the right to assign, transfer, delegate, or otherwise dispose of, whether voluntarily or involuntarily, by operation of law or otherwise, this Agreement or any of its rights or obligations under this Agreement without the prior written consent of ARDC. Any purported assignment, sale, transfer, delegation, or other disposition by Grantee, except as permitted herein, shall be null and void. ARDC may assign, transfer, delegate, or otherwise dispose of this Agreement and any of its rights or obligations of this Agreement without the prior written consent of Grantee. Subject to the foregoing, this Agreement shall be binding upon and shall inure to the benefit of the parties and their respective successors and permitted assigns. Nothing in this Agreement, express or implied, is intended to confer, nor shall anything herein confer on, any person other than the parties and the respective successors or permitted assigns of the parties, any rights, remedies, obligations, or liabilities.

**17. Remedies; Injunctive Relief.** Any specific right or remedy provided in this Agreement shall not be exclusive but shall be in addition to all other rights and remedies set forth in this Agreement and permitted under applicable law.

**18. Counterparts.** This Agreement may be executed (including, without limitation, by facsimile signature) in one or more counterparts, with the same effect as if the parties had signed the same document. Each counterpart so executed shall be deemed to be an original, and all such counterparts shall be construed together and shall constitute one Agreement.

**19. Entire Agreement.** This Agreement (including any Exhibits attached hereto which are hereby incorporated by reference) constitutes the entire agreement with respect to the subject matter hereof, and shall supersede any prior or contemporaneous oral or written agreements, understandings, or communications between ARDC and Grantee with respect to the subject matter hereof. This Agreement may not be amended or modified, except in writing signed by duly authorized representatives of both ARDC and the Grantee.

## Signatures

The undersigned certifies that he or she is a duly selected and authorized officer or representative of Grantee and that, as such, is authorized to accept the Grant on behalf of Grantee, to obligate Grantee to observe all of the terms and conditions placed on the Grant, and, in connection with the Grant, to make, execute, and deliver on behalf of Grantee all grant agreements, representations, receipts, reports, and other instruments of every kind.

### AMATEUR RADIO DIGITAL COMMUNICATIONS

By: \_\_\_\_\_

Name: \_\_\_\_\_

Title: \_\_\_\_\_

Date: \_\_\_\_\_

### {organization}

By: \_\_\_\_\_

Name: \_\_\_\_\_

Title: \_\_\_\_\_

Date: \_\_\_\_\_

## Exhibit A

### Grant Final Report Worksheet

Please complete and return this Grant Report Worksheet to ARDC within 60 days of the Grant End Date or upon grant completion, whichever is sooner. Report Worksheets and any supplementary materials may be submitted to [giving@ampr.org](mailto:giving@ampr.org).

#### Grant Information

Grantee Organization: Cascade Amateur Radio Society dba  
Oregon HamWAN

EIN 46-0476753

Amount of Grant: \$88,391.00

Grant Start Date: June 1, 2021

Grant End Date: December 1, 2022

Amount of Grant Expended (USD): \$ \_\_\_\_\_

#### Grantee Contact Information

Contact Name: \_\_\_\_\_

Title: \_\_\_\_\_

Mailing Address: \_\_\_\_\_

Phone: \_\_\_\_\_

Email: \_\_\_\_\_

## Grant Report

### Confirmation of Requirements

Please confirm that each of the following requirements was met consistent with the Agreement by checking each box. If you are not able to confirm any of the below, please provide an explanation in a narrative attached to this report.

- The Grant was used in furtherance of the Grant Purpose and consistent with ARDC's purposes under IRC Section 501(c)(3).
- The Grant was not used in violation of or in a manner inconsistent with the Agreement.
- There has been no change in Grantee's tax status or classification since the Agreement was entered into.

### Programmatic Accomplishment(s)

Please attach copies of any publications or other work product resulting from or funded by the Grant, or otherwise demonstrating the programmatic accomplishments achieved wholly or in part through the Grant.

### Expenditures to Date

Please provide an overview of how Grant funds have been spent so far. If this is a final report, please provide details about all expenses in the grant, including receipts.

I hereby certify that the above and attached statements, if any, are true, accurate, and complete.

Signature of Authorized Representative: \_\_\_\_\_

Name of Authorized Representative: \_\_\_\_\_

Title of Authorized Representative: \_\_\_\_\_

Date: \_\_\_\_\_

# ARDC Grant Application Form--- April 2021

Title: The Oregon HamWAN Backbone Project

By: The Cascade Amateur Radio Society (CARS) dba Oregon HamWAN

## Grant Proposal:

### **A. The Oregon HamWAN Backbone Project-**

We are applying for this grant to fund the deployment of HamWAN in Oregon. Specifically, we are applying to fund deployment of 12 HamWAN backbone distribution sites between Portland and Salem, Oregon to extend the Puget Sound Data Ring, which currently extends from Seattle to Vancouver Washington, from Vancouver Washington to Salem Oregon, plus additional equipment for education and demonstration purposes.

HamWAN is a technology that supports high speed Internet connectivity (over 100 Mbps between backbone distribution sites, and up to 10 Mbps to each client node) over amateur radio using the 5.8 GHz band. Since HamWAN requires line of site communication, an effective HamWAN network requires deployment of HamWAN backbone distribution sites on towers. HamWAN supports a range of up to 50 miles between towers.

Each HamWAN site typically consists of three HamWAN Distribution Sectors, each offering 120 degrees of coverage, and typically one or more point to point links. A HamWAN site may also include a server supporting email, web, IP telephones, etc., and may include an Internet gateway (hardwired or satellite). Every HamWAN site should include provisions for good emergency power. The KOIN TV Tower Site in particular offers us unlimited Rack Space and its generators can power the site for two weeks without re-fueling. It is the most hardened site, so we will put the network servers there.

The value of HamWAN comes from the ability of amateur radio operators to setup mobile or portable HamWAN nodes, which can be aimed toward the nearest HamWAN Distribution Site to provide emergency communication via Internet during disasters. Such a mobile or portable setup requires HamWAN equipment costing less than \$100, as well as an inexpensive WiFi router and a 12 Volt battery.

Oregon is at extreme risk of a major Cascadia Subduction Zone earthquake. In the hours immediately following a disaster, when the Internet, landline, and cell phone communication is likely to be disrupted, effective communication between volunteers, first responders,

hospitals, and government agencies is critical. Amateur radio has always played a vital role. Unfortunately, voice communication is slow, and traditional digital communication such as Winlink has severely limited bandwidth. The ability of amateur radio operators to setup portable HamWAN nodes throughout affected communities, and communicate effectively via email, including attachments, would add tremendous value.

Since we plan to install servers at the KOIN TV tower, we will be able to provide email service within the disaster area even if all outside Internet connectivity is lost. Our web server will host maps, personnel directories, and other high value documents that might otherwise be unavailable during a disaster. Allowing those who are not licensed amateur radio operators to speak directly with one another using VOIP telephones would provide additional value.

### **Background-**

The Cascade Amateur Radio Society (CARS) is a peculiar club. We provide Infrastructure for the Amateur Radio Community. We have 9 Repeaters for General Ham use. We join in Emergency Communications Projects with many local CERTS, ARES, and even Church groups. CARS works directly to support the EmComm efforts of over 1200 Hams in the area.

When many Oregon Hams expressed interest in starting a HamWAN Project, CARS stepped up and funded over \$6,000 for some equipment and coordinated experimentation. Seeing the need for a corporate entity to further the HamWAN cause, CARS officially registered the dba of "**OREGON HAMWAN**". CARS is a 501(c)3 and carries ARRL Liability and Theft Insurance to protect the Project and its members. Over 80 hams, many IT Professionals, have agreed to help in positions in the Project. We have the core IT People we need; we just don't have the money to implement the plan.

Prior to COVID many of the local radio tower sites allowed trained and certified Ham volunteer Tower Climbers to install equipment on their TV/Radio Towers. We planned on using our volunteer Tower Climbers. However, since COVID most commercial site managers/owners now require the use of their approved commercial climbing companies. This adds about \$12,000 to the cost of implementing the Oregon HamWAN. It also can add several months to the installation of projects.

### **Timing:**

We have decided on a Project Manager, who will be in charge of Scheduling this project. He will have weekly contact with each Committee Chair to encourage, persuade, and 'gently nudge' as needed. He has been a Project Manager before, and will keep us on schedule. Our

intent is to have the full Network up and running within 12 months; however, because of known issues with scheduling the professional tower climbers that we have to rely on, we are requesting 18 months to complete it.

Covid should not be much of an issue now that everyone is eligible to get the vaccine. Still standard precautions will be used. Not everything is bad from COVID. It taught us the benefits of Zoom meetings. Primarily, it can save time. Transcripts of the meetings help also.

**Project Summary:**

When funded, we will build out the 60+ mile Oregon HamWAN System from Vancouver, Washington to Salem, Oregon using 12 Sites. We will follow two separate pathways from Vancouver to Salem. It will cover the Portland Basin (Multnomah, Clark, and Clackamas Counties), the Tualatin Valley (Washington County), and the Willamette Valley (Marion and Polk Counties). Because of siting and terrain, it will also upgrade the HamWAN Network coverage in much of Clark County (including Vancouver) Washington. That encompasses the majority of Amateur Radio Operators in Oregon. This will be the High-speed Digital Backbone that we need to foster experimentation, build interest in Amateur Radio, and to modernize the look of Amateur Radio. Oregon has many MESH Digital Groups. HamWAN will help bring them together and provide services to make Ham Radio truly relevant in 2021 and beyond.

If the amount we are asking for is too big of a barrier to funding us, we can scale the Project down from 12 Sites to 7 sites with a lower price tag. However, to do it right takes 12 sites. If we cut it back, its services will only be available to about one-half of the amateur radio operators that we plan on serving.

Interest in HamWAN and MESH is strong in Oregon. We've spent several thousand dollars and many hours on preparations. We have volunteers lined up to implement the plan. We know it will work. We know the time for it is now. It's truly a --- **"If you build it, they will come"** situation.

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## B. Committees:

Prior to the COVID outbreak we split Oregon HamWAN implementation into several “Committees”. Each Committee has a chairperson and a group of volunteers that chose to work on that particular task. We have managers of small community Telephone exchanges. We have several Wireless Internet Service Providers (WISP’s). We have IT Managers from very large corporations. We have marketing and legal professionals. And we have people that will work at whatever we need help with. Over 80 people have volunteered to help make Oregon HamWAN a reality.

### What are the Committees?

1. **Asterisk VoIP Phone Team** : We plan to provide a Ham Phone System that would allow calls to virtually anywhere in the World. It also has to have Voicemail, Caller ID, Call Forwarding, Conference Calls, Logs, Recordings, and use a Codec that is easy on bandwidth. It also must be able to operate within the HamWAN even if the outside internet is down. They quickly got three different servers going. Several of us tried the systems out. We can quickly implement VoIP Phones due to their testing and work.
2. **Internet Gateways (Sharing your personal Internet with the Greater HamWAN):**  
Hams with different Internet Service Providers have volunteered to share their home internet connections with the Oregon HamWAN. We have researched how the Washington HamWAN Network has done this and we have worked out Load Balancing, Bandwidth Limits, and Roll-over issues. Day Wireless and the BN/Union Pacific have offered us a link into their internal data Networks as a backup too. The Grant requests funding for one year of the StarLink satellite Internet service (\$499 for Equipment and \$99/month for 12 months) and one year of 4G LTE Internet access (through Beacon at \$135/year) to add redundancy to the Network. We are ready to go.
3. **Legal and Insurance:** CARS will continue to carry insurance on our equipment to cover Liability and Theft through the ARRL’s insurance program. CARS has been faithful in doing this. Negotiations, Internal Forms, Waivers, and Site contract reviews will be done by our two members that are attorneys. Both have extensive experience with contracts.
4. **Help Desk and Customer Service:** This Team has started with a core of IT Professionals and will expand as the Network steps up. A “Repair Ticket” type system has been researched and will be implemented. They will also work as mentors to new Network members. On our Website ([www.OregonHamWAN.org](http://www.OregonHamWAN.org)) we have created and published a program that streamlines the configuration process for end-user’s equipment. Instead of typing lines and lines of code, it asks a few relevant questions and then spits out a configuration file that can be easily uploaded to the equipment. Getting new users up and running is a priority.

5. **Website:** We have a Webmaster and a design team that keep the site up to date. Affiliate Links will be added to help generate funds for operation of the Network. It will have an Equipment Store.
6. **Training Videos:** We have Cameras, Software, and Script writers lined up. Our new users will need training.
7. **Funding:** With this ARDC Grant the initial Oregon HamWAN Backbone will be created. We will then have something physical to show other potential grant givers. In the future we will need funding for expansion, to increase quality of service, and for maintenance. Our model is to provide Backup High-speed Digital Communications for our local Governments (through ARES) and the 27 Hospitals in the Portland/Vancouver/Salem area through the HEART amateur radio network. We will provide Emergency Communications whether they make donations to Oregon HamWAN or not. However, we will 'suggest' a \$1,000 per year donation from most of such entities. It's not a quid pro quo. And being in the various EOC's will strengthen the position of our ARES Radio Operators.

Another source of funding is Matching Funds. Intel, Nike, and several other local corporations will donate cash to non-profits based on the number of hours their employees donate to the cause. Washington County ARES receives nearly all of its operating funds from Intel's Corporate Giving. PayPal, Amazon Smile, Go Fund Me, Fred Meyers Charitable Giving, selling Merchandise, Affiliate Links, and other ideas will be pushed. We've earned several thousand dollars so far; but as you can see from our request, this endeavor isn't cheap.

8. **Budget Committee:**

Along with Funding goes Budgeting. Each committee has a person on the Budget Committee. We have bookkeeping software and at least annually we do an in-house audit. The CARS Treasurer has been the head of this committee; but once we get the ARDC Grant we will have a volunteer experienced bookkeeper involved as the Chair. Although we are Amateurs--- Money makes it happen. Budgeting gives us the targets we need to achieve.

9. **Marketing:**

We have a former marketing person from Nike. She has the ability to create our marketing materials; including flyers, YouTube Videos, PowerPoint Presentations, and other items to get the word out about HamWAN. We will target Ham Clubs, Schools, ARES, Served Agencies, and new Hams. The Network itself will be a great marketing tool. Part of the Grant Request is to create 5 Demo End-User units (for \$550 each). They will be used to Demo the Network often. We have seen that a hands-on demonstration

gets people interested more than anything else. We will Demo, and Demo, and Demo some more. We will also offer help to setup linked repeaters.

#### **10. Membership:**

We have a diverse and talented membership. We have created a database of each members skills, interests, and participation. It helps guide us when we need help on something. Along with Marketing, Membership will be Demonstrating the Network. Our current 80+ members are great, but more are needed. Membership Dues may be implemented; but the Network will always be free to the end-user. That's Amateur Radio.

#### **11. Sites:**

We have a long list of potential sites to get to down the line. However, the 12 sites in this proposal are the core sites that will make Oregon HamWAN immediately available down the I-5 Corridor. They are the biggest bang for the buck. The Chair of our Site Committee has experience with siting several Amateur Radio Repeaters and has pulled together a strong crew to evaluate the sites. It was hard for them to weed it down to just 12 Sites for this Grant; but they did it. These sites are 'got-to-have' sites. Once funding is approved, we will finalize the contracts for the Sites while we wait for the equipment to arrive. The Site Rents have been discussed and the 1<sup>st</sup> year of rent (for \$1,700) is built into the Grant Proposal.

Our central Network Services Servers will be located at the KOIN Tower site. It has about two weeks of backup diesel generator power available and is an excellent datacenter.

#### **12. Experimental Projects:**

Raspberry Pi, Arduinos, WinLink, APRS, Weather Satellite Data, MESH interconnections, and other gear. This committee is well represented.

#### **13. Site Security:**

Most of our sites are commercial sites and therefore quite secure; but this team will evaluate each site as we gain access and make security recommendations.

#### **14. Network Planning / Administration /and Security:**

This team is made up of IT Professionals that have a proven track record. They have created our IP Addressing System, Network Security measures, Network Design and troubleshooting. They do this for their Day Jobs. The lead is the IT Manager for KGW TV / Radio. He knows IT and has a vision for HamWAN. They have worked hard to make Oregon HamWAN compatible with Washington's HamWAN; but ours will function autonomously if needed.

#### **15. Hardware/Site Installation Team:**

Configuration of equipment, testing of the network, Repairs, Maintenance, Inventory, Purchasing, and getting things done. This team will be busy with the Grant. Each

member has hands-on experience with the MikroTik equipment. The goal has been to standardize the equipment so that the cookie cutter approach to the sites can be used as much as possible. Learn it once and repeat.

**16. Scrounging Team:**

Their job is to try to source useable equipment as cheaply/reliably as possible. Used Laptops. Used Network servers, routers, PDU's, switches, UPS's, and whatever. So far, we have procured 5 Servers through this team. Don't think less of this Committee because of its name. They perform a very valuable function.

There are several other teams that have done much to prepare for this project. Some of them are Email, BGP Partners, Network Services, Software, GIS/Mapping, Backup power, and such. There is a job or two for everyone.

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**C. Other Support:**

**What other support is pledged on this project?**

1. Four government agencies will not charge us site rent to be on their towers.  
The other 8 Sites have reduced their Site Rent for us.
2. Intel and Nike will donate funds based on the number of hours their employees donate to the project.
3. CARS has already spent over \$6,000 on this for testing and preparations.
4. CARS dba **Oregon HamWAN** will-
  - a. Spend another \$2,000 for Miscellaneous costs outside of the Grant Request.
  - b. Carry the necessary Liability and Theft Insurance.
  - c. Cover equipment replacement and upgrade costs.
  - d. Cover the annual Site Rents after year #1.
  - e. Provide Site Security measures.
  - f. Maintain its 501(c)3 status to encourage donations.
  - g. Seek State/FEMA and UASI Grants.
  - h. Annually Inventory the equipment.
  - i. Recruit whatever manpower is needed on the project. We work directly with over 1,200 Hams.
  - j. Provide Website Content and hosting.
  - k. Provide sites for meetings.
  - l. Support the Funding Committee.

- m. Create an online store to facilitate purchase of end-user equipment.
  - n. Leverage its name and good will to get ARES and other groups on board.
  - o. Apply for grants from foundations to help with operations.
  - p. Work with individual sponsors.
  - q. Provide bookkeeping services.
  - r. Get the project done on time and on budget.
  - s. Demo the Network to Local Governments, ARES, and local Hospitals to provide service to them and seek funding. Our target is \$1,000 annually from each Hospital and Government Agency.
  - t. Take HamWAN Demos to the schools. Build up public interest.
5. Intel's Security/Preparedness Mgr. has expressed some interest in connecting HamWAN and their MESH Group. He has some discretionary funding to accomplish that.
  6. BN/Union Pacific has offered to let us connect to their In-house national Data Network.
  7. Day Wireless has offered to let us connect to their In-house Data Network that covers all the whole West Coast from BC to Mexico.
  8. Seek donations from users; but not pressure them. HamWAN is Free.