QIN Emergency Communications

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Quinault Amateur Radio Club – W7QIN

- Formed July 2017 – Tax Exempt Corporation

- Formed to improve emergency communications to the north central coast & west Jefferson areas

- Planned repeaters to cover the areas north of existing BeachNet coverage

- Planned link to K7CPR/Evergreen Intertie

- Membership is at 10 people and growing

- ARRL Affiliated

- Hoping to designate system as ARES when fully operational

Planned 2 Meter linked Ham Repeater System

Mount Octopus

Neilton Point

Q Village

- 3 Two-Meter UHF linked repeaters
- Repeaters designed as standalones if the link fails
- Provides excellent coverage of the QIR, west Jefferson County, and SW Clallam County
- Future link to K7CPR/Evergreen Intertie is planned
- Autopatch at Neilton in the future
- Possible NOAA tsunami alerts planned
- Full implantation stalled due to promised funding not happening
- Neilton the only current repeater made possible by individual and equipment donations

This will cover from Beaver to Westport and east to Aberdeen.

Quinault Amateur Radio Club
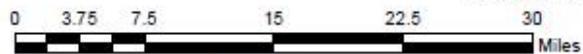W7QIN 2 Meter Linked System
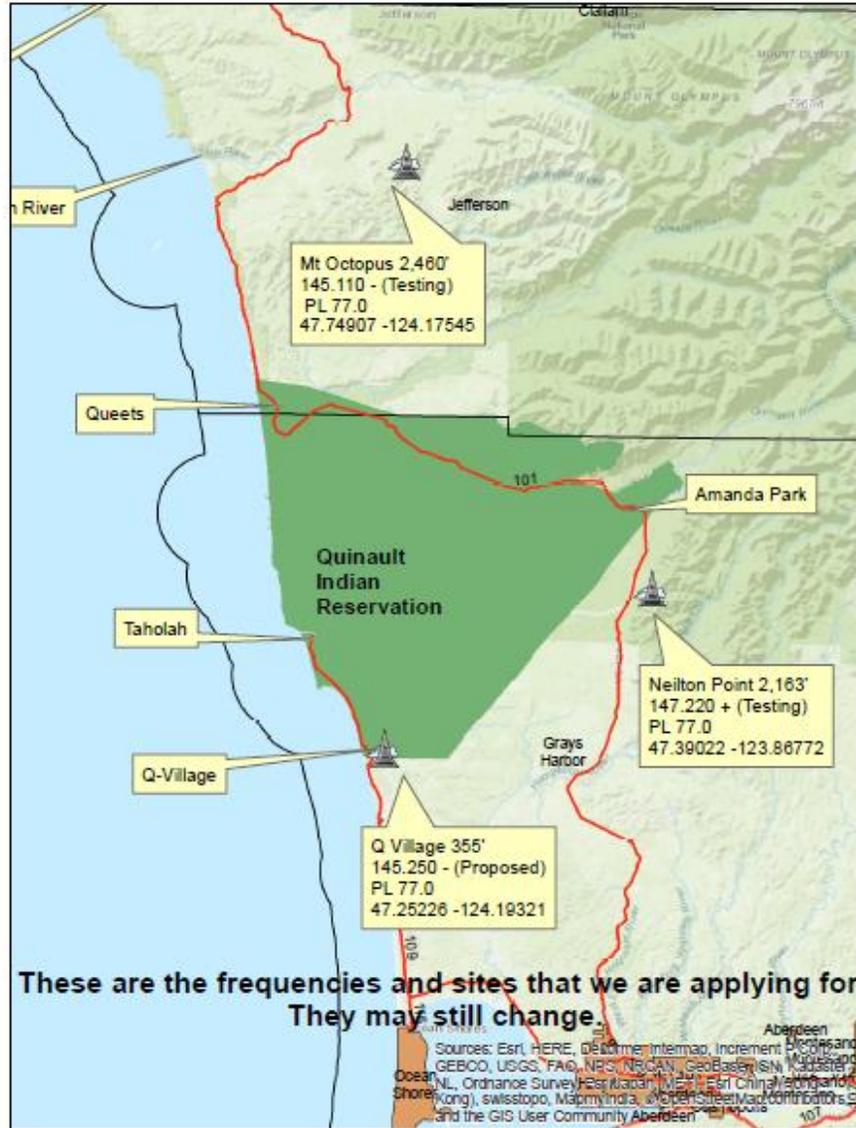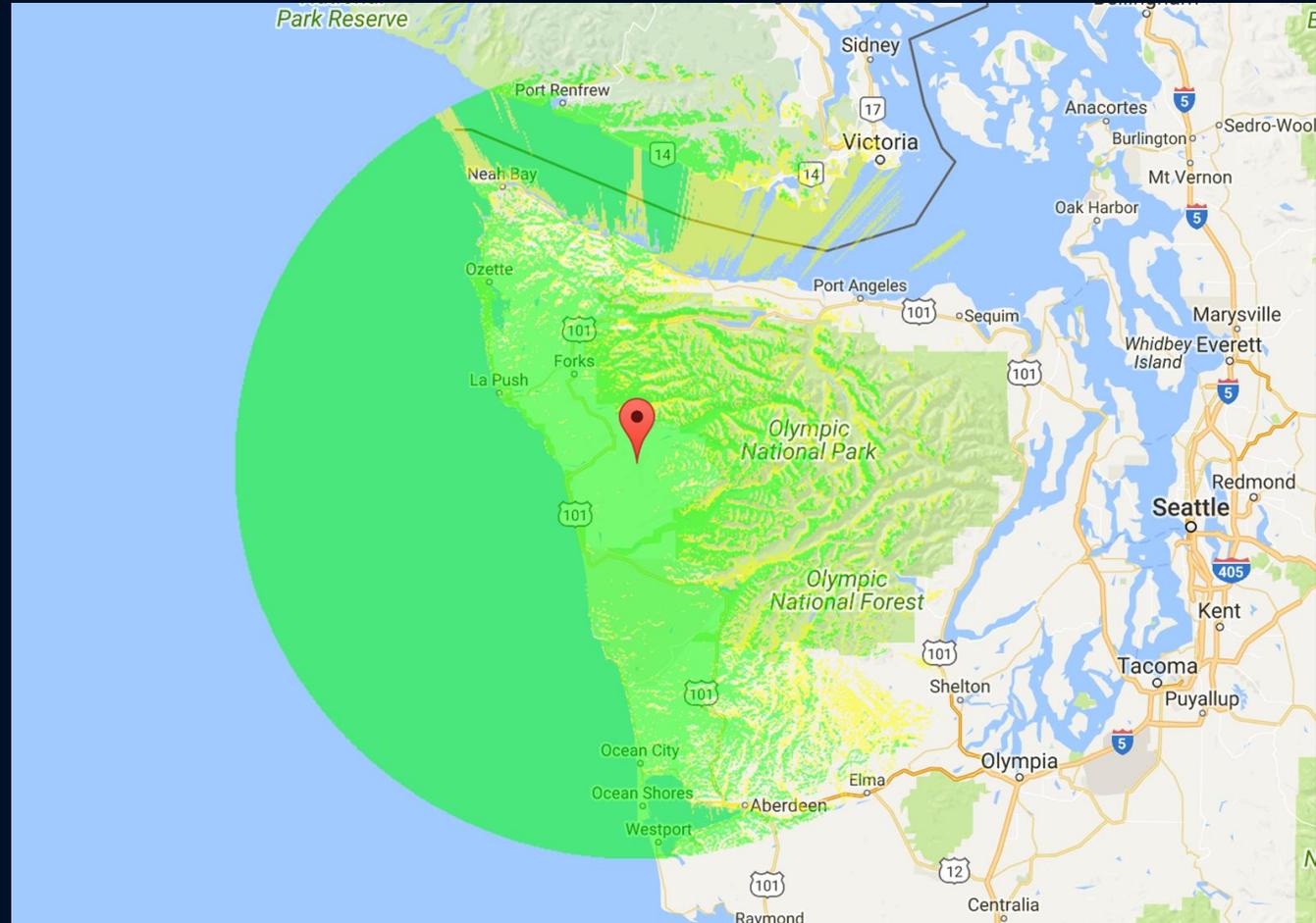
Existing Public Safety Radio Repeater System

Types of emergencies

- Critical Infrastructure Failure

- Severe Flooding

- Severe Windstorms

- Landslides

- Wildfires

- Earthquakes
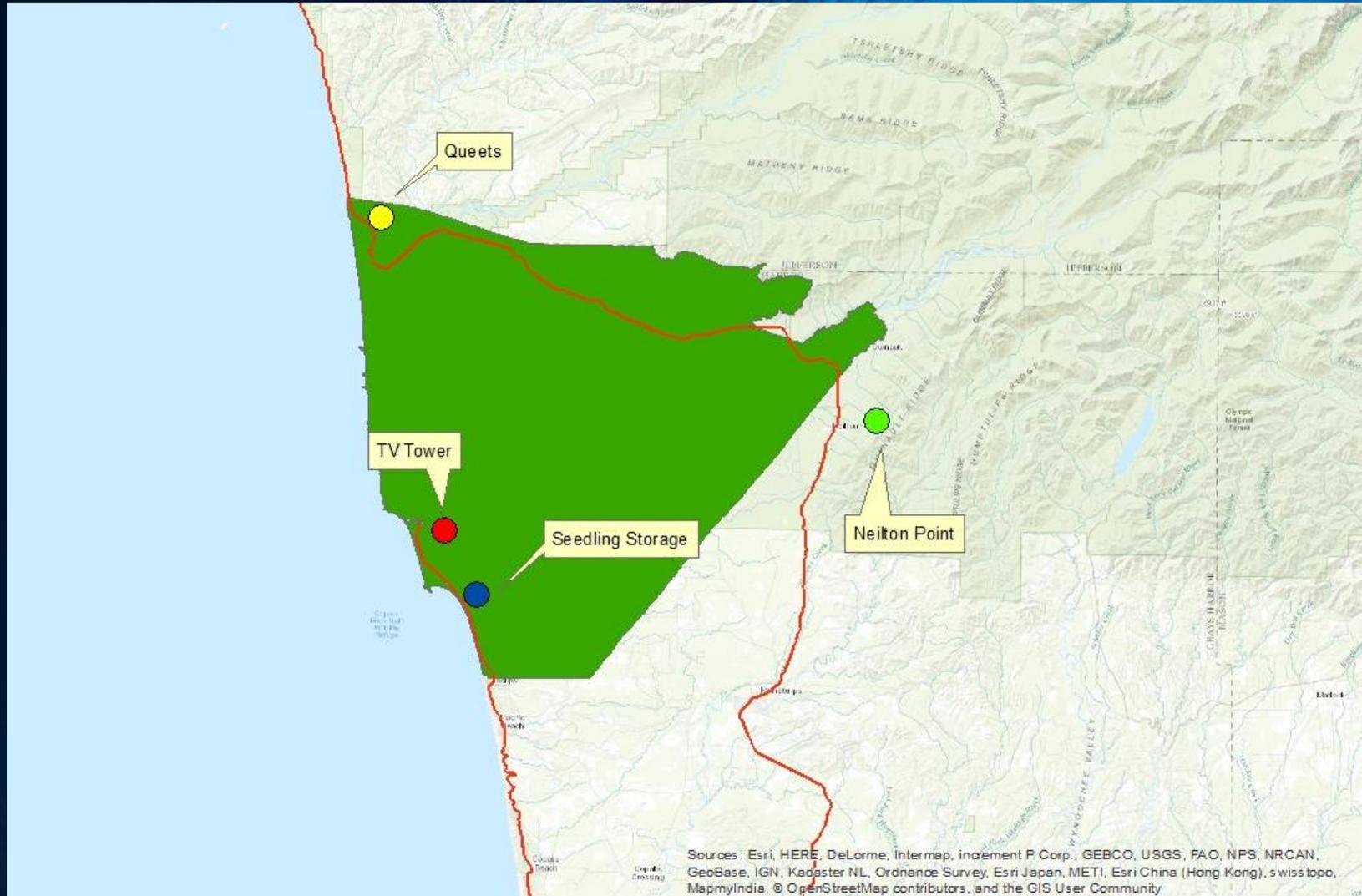
- Tsunamis

- Man-made (HazMat) and Terrorism

Current Communication Plan

- If repeaters are installed a Net Control station will be established

- Net Control will check into BeachNet Net Control

- "Islands" will establish their own system within them to report to a central point or person

- A communications person from each island will report to net control at a designated time or sooner if resources are needed

- Net Control will relay information to EM and send updates/requests via Winlink

- Net control will have access to all three public safety channels

- Queets and northern areas will have to use simplex channels to relay without repeaters and all repeaters will be down with two days without battery maintenance making simplex the only communications

- FEMA plan does include dropping generators off at out comm sites **eventually**

- Currently we have no long term solutions for more than two days

Cascadia Rising Observations

- We are not prepared for communication needs

- Simplex communications from Taholah to anywhere outside or across the QIR are not possible

- Existing systems do not cover the QIR

- Long Term communication plans are non-existent

- More Infrastructure and alternative backup power sources are needed

- The Queets and West Jefferson areas are not covered

- No communications plans were in place for the QIR

- An EOC and an Equipped Mobile Command Post are needed

- We're hopeful these will be fixed before the real thing happens

Current Resources

- No EOC – We have two patrol trucks outfitted

- 2 Trucks equipped with 2M/70cm and Kantronics modems

- Backup food/water for a few days

- Most staff are ICS trained

- 2 Medical clinics

- 2 Two-meter repeaters (One is down)

- 2 70cm repeaters (Unreliable coverage in key areas)

- High spots for radio relaying

- High ground nearby for evacuations

- Close knit community for helping each other

Cascadia Event – Assuming the worst

- All landlines fail

- All cell-phone systems get overloaded and fail

- The microwave dish becomes misaligned and we lose internet

- Repeater backup batteries die within a few days (+/- depending on usage)

- The Police Department dispatch is destroyed (No EOC as a backup)

- Gas for backup generators becomes non-existent

- 10 days (ABSOLUTE BARE) minimum to bring in outside resources as Seattle and high-population areas are a FEMA priority

- 30 days or more is a realistic FEMA response expectation

QDNR Enforcement has:

- Updated our communication needs with FEMA for a disaster

- Got the radio use agreement for the "OSCCR" radio channel to allow us another direct contact option with the EOC via WSP via Mt. Octopus

- Tentatively secured tower space on Mt Octopus

- Outfitted two vehicles to act as emergency communications posts

- Installed radio modems for limited data capability

- Participated in Emergency Communications Nets

- Performing NET Control functions on GHARC Tuesday night NETS

- Identified some needed improvements

- Identified coverage gaps in our current options

- Installed radio data program on two laptops

- Written QDNR Incident Command Post procedures

- Obtained ICS forms to keep on hand

- Prepared a "Visitor" radio frequency list to handout to responders

- QDNR has two FCC licensed operators to work communications, plus a third to fill in as necessary

- Programmed ICS/FEMA Response channels into QDNR Enforcement vehicles

- We are working with QNPD to ensure communications continuity

QDNR Enforcement Objectives:

- Upgrading our 17 YO repeaters with more energy efficient models (Stay away from digital P25 systems)

- Increasing battery backup sizes

- Roll-out solar panels at each site for long term self sufficiency

- Equip a mobile command post and create an EOC on high ground

- Upgrade key personnel mobile radios to dual band and high power

- Pre-Identifying public communication areas (Taholah, Queets, etc.)

- Assist with a 2-meter ham system that covers the QIR and ceded area

- Have a satellite phone limited data plan

- Activate a couple of satellite phones

- Upgrade/add to existing QDNR and Phoenix systems

- Purchase equipment for longer term data communications

- Provide limited bandwith/phone connections for survivors

- Purchase mobile repeaters

- Purchase a cache of cheap radios for rescue volunteers/CERT members

- Create a QIN wide protocol establishing which channels will be used and what they will be used for

- Establish protocol on which channel will be the "Priority/Command" channel for immediate life/death situations and calls

- Figure out who will be logging these calls and who will be passing along pertinent information/requests to the EOC(s)

- Recruit more helpers to assist with communications

- Purchase and license low-power FM Radio transmitters

Questions???