Saltwater Antenna

2 meter vertical monopole antenna using saltwater instead of wire

Why build a saltwater antenna?

Mostly for quicker, easier tuning without wasting wire

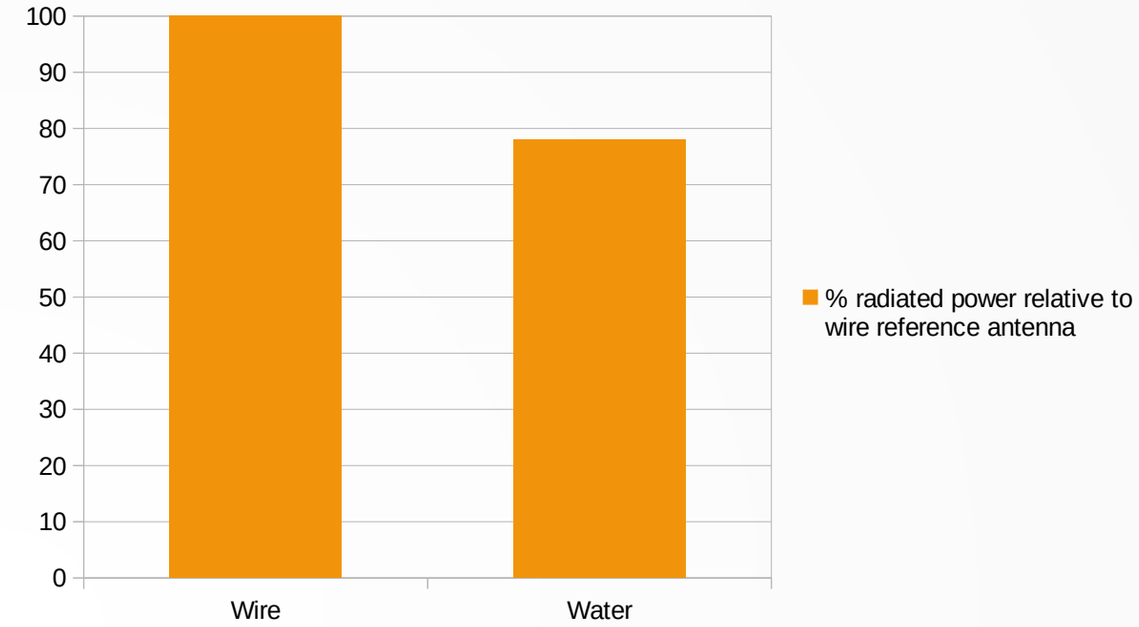
- The antenna can easily be shortened or lengthened by pouring saltwater into or out of the tube.
  - With a wire antenna, if the wire is cut too short, it is often necessary to replace the entire wire. With a water antenna, more water can be added.
  - Unlike a wire antenna, the water antenna can be lengthened more easily than it can be shortened. If too much water is added, it is necessary to tip the antenna over to pour water out.
    - When tuning the water antenna, it is best to start with it too short and slowly add water, the reverse process of tuning a wire antenna.
    - Tipping the antenna over is not very difficult with a 2 m antenna, but it could be a problem with an antenna made for a lower band. It would probably not be too difficult to add a valve to the bottom of the tube to allow water to be drained out.

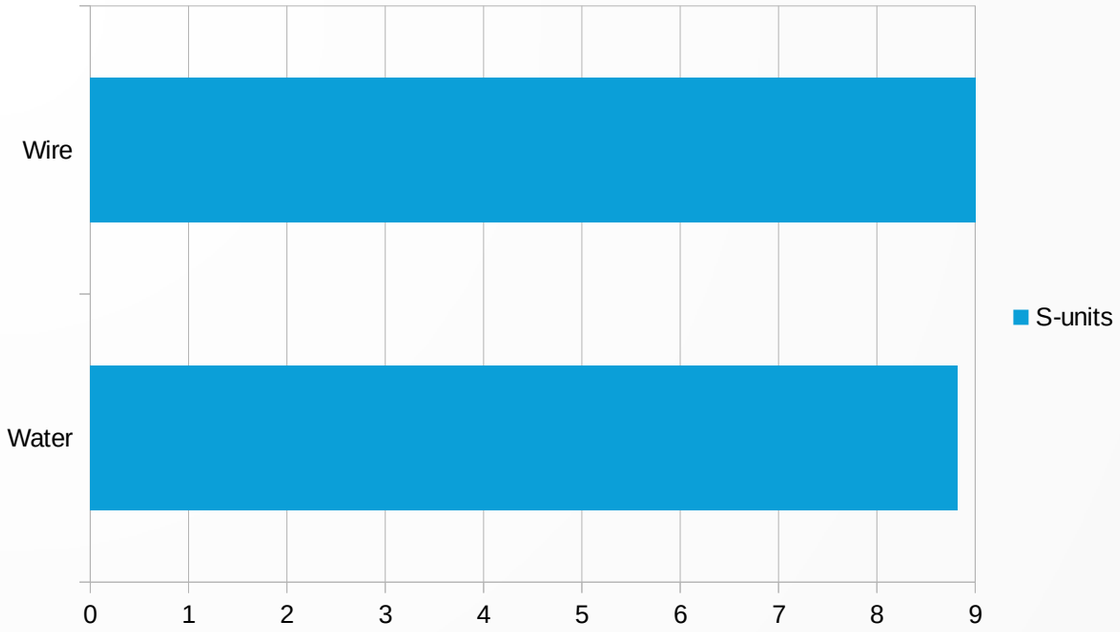
Does it work?

The radiated signal strength is very close

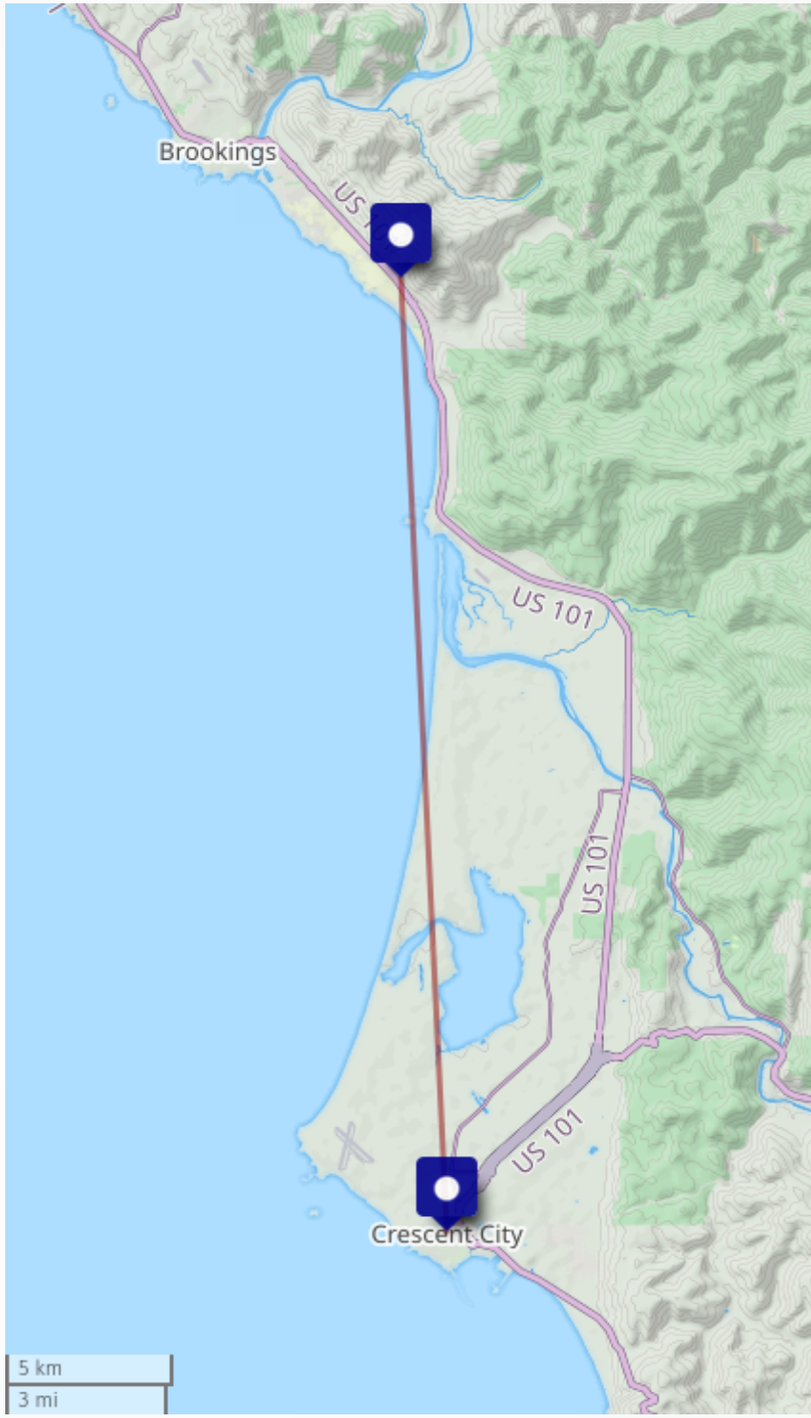
to that with the same radio and a wire antenna.

The signal transmitted from the water antenna was about 78% as strong as that from the wire antenna (a 22% drop). While this seems like a large difference, it is only 1.1 dB, or about ⅛ of a standard S-meter unit.





I was able to key the DNARC Crescent City repeater (146.880 MHz), located about 18 mi. (29 km) away from my antenna outside our house in Harbor, using 1 W from a Baofeng UV-5R connected to the saltwater antenna.



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