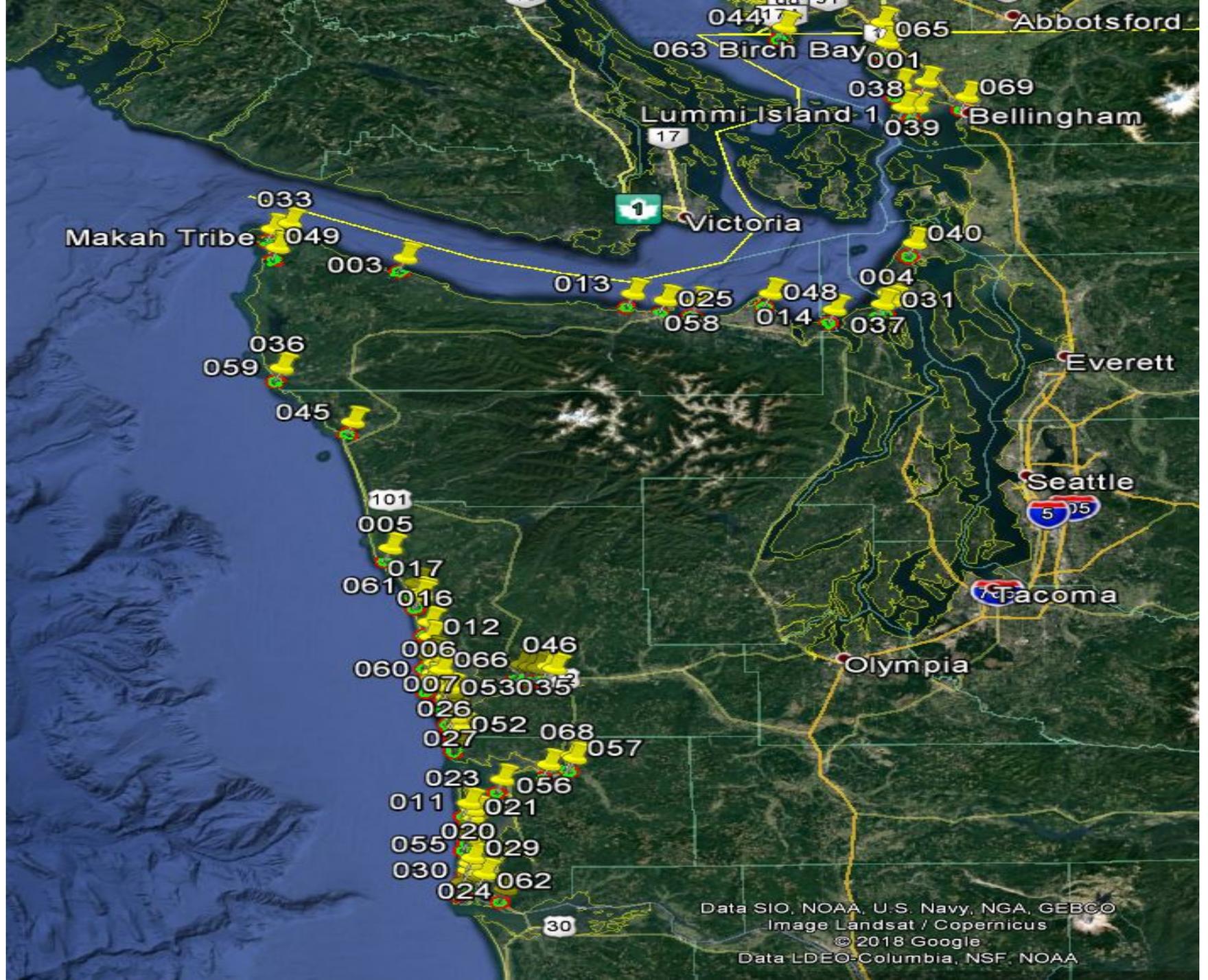


All Hazards Alert Broadcast System

- Tsunami Warning System –
- Can be used for other warnings -
- Uses Satellite Communications
for activation –

There are currently 68 sirens on the coast of Washington State. The coverage areas include most major population centers from Neah Bay and Point Roberts in the North, all the way down to Cape Disappointment State Park and the Port of Chinook in the South





Data SIO, NOAA, U.S. Navy, NGA, GEBCO
Image Landsat / Copernicus
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Data LDEO-Columbia, NSF, NOAA



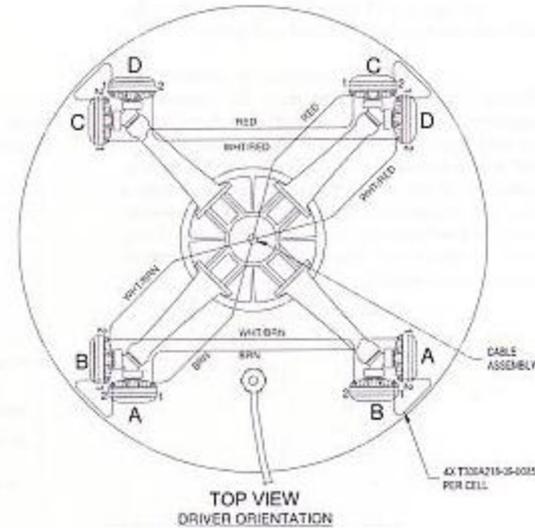
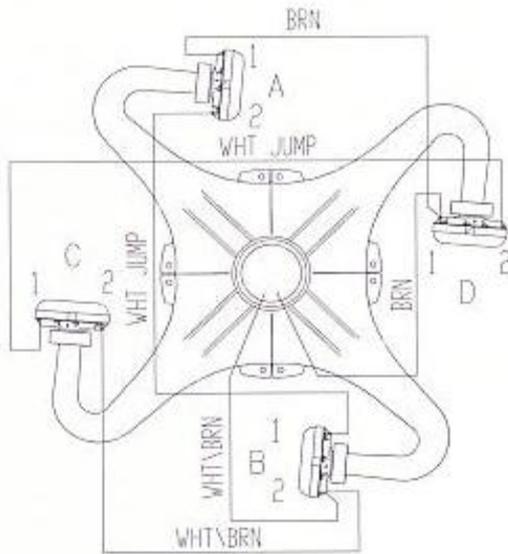
This is a representation of the coverage area for Neah Bay Washington. The **green** outlined area is the 60db coverage area and the **red** outlined area represents the 70db coverage area.

Siren Audio Technical Specifications Comparison Chart

Model #	Advertised Range	Output in Watts	dB Output at 100'	Coverage area in SQ. Miles	Electronic Cabinets	Battery Cabinets
MOD6048	4525'	4800	125	2.31	2	2
MOD8032B	4222'	3200	124	2.01	1	1

- Federal Signal no longer makes the MOD6048 system
- We have both models of systems in our system
- The systems use the same components
- The primary difference is in the overhead speaker array, which was redesigned to reduce the number of amplifiers needed while maintaining an almost identical output.

Active Module Driver Orientation



New Driver Orientation

Old Driver Orientation

New orientation provides greater output even with decreased amplification and size. So the audio yield at 100' with 8 amplifiers is only 1dB less than the output with 12 amplifiers.

System Capabilities

- Can produce the Wail sound, a Steady Wail sound, and/or play the Westminster chimes.
- Has the capability to make test and actual evacuation announcements in English and Spanish (These are prerecorded on each sirens installed micro SD card.)
- Using pre-programmed phrases and words, messages can be created at any control point for such things as 'Shelter in Place', and Hazardous Material Notification.

Control Points and Activation

- Primary Control Point is the Washington State Emergency Operations Center
- Secondary control points can be established at each county, city, or tribal entity as needed
- Internet based activation via satellite
- Uses the Skywave Mobile Communications system – Inmarsat satellites (There are three satellites in our viewing area.)

The future

- We are adding more sirens to the system and will be adding three sirens this year.
- We are upgrading our software operating package and adding cloud computing that includes the capability to activate the sirens from anywhere in the world.
- Each entity that has responsibility for a siren will be given a log on and thus the capable of activating their siren if needed.
- An off site control station, outside the area that may be effected by a major local earthquake and loss of internet connectivity, can be established so that failure of the internet in the Western part of Washington State does not prevent activation of the sirens in the event of a tsunami warning for the coast of Washington.

Questions?

