Before the

Federal Communications Commission

Washington, D.C. 20554

In the Matter of Notice of Proposed Rulemaking:		
Travelers Information Stations;	)	PS Docket No. 09-19
American Association of Information Radio Operators Petition for Ruling on Travelers Information Station Rules;	)	
Highway Information Systems, Inc. Petition for Rulemaking;	)	RM-11514
American Association of State Highway and Transportation Officials Petition for Rulemaking	)	RM-11531
	)	Comments Due: 02/18/2011
	)	Reply Comments Due: 03/7/2011

ADDITIONAL COMMENTS OF DANIEL R. GROPPER

Daniel R. Gropper ("GROPPER")[1] respectfully submits these brief additional comments in the above-captioned Petitions for Rulemaking[2] in view of the tragic earthquake and tsunamis that occurred in Japan on March 10, 2011.

[1] Daniel R. Gropper is an individual with over twenty (20) years of experience in the improvement of, and successful integration of, NOAA Weather Radio ("NWR") into other communications systems. GROPPER has played many roles in this process. Any comments made herein by GROPPER are solely his own and are not representative of the positions or opinions of any entity mentioned herein.

[2] Notice of Proposed Rulemaking, Travelers' Information Stations, released December 30, 2010; American Association of Information Radio Operators ("AAIRO") Petition for Ruling on Travelers' Information Station Rules, filed Sep. 9, 2008; Highway Information Systems, Inc. ("HIS") Petition for Rulemaking, RM-11514, filed July 16, 2008; American Association of State Highway and Transportation Officials ("AASHTO") Petition for Rulemaking, RM-11531, filed March 16, 2009.

Permission to file these additional comments is requested in view of the occurrence of the above events, which occurred after the end of the reply comment period, and to make of record the text of actual, current tsunami warnings.

Summary of GROPPER's Additional Comments

1. GROPPER is in favor of the modernization of, and integration of NOAA Weather Radio ("NWR") into what is currently, the Travelers Information Station ("TIS") low power AM radio service
2. Low power AM radio stations, connected to NWR, would be an important addition to the national tsunami warning system.
3. Low power AM radio stations and their blinking warning lights can be powered by solar power, which is highly desirable in shore locations where shore power is often non existent or unreliable.
4. Tsunami alert messages on low power AM radio stations can be received by inexpensive, portable AM radio receivers and automobile radios.
5. The low power AM radio station's blinking lights can alert people at the shore of a local emergency even if their cell phones and portable radios are packed away and they are away from their vehicles.

Tsunamis Are Huge Threats to Life and Property throughout the World

Although, thankfully, tsunamis are infrequent events, when they occur, they can be devastating to life and property. They may also cause massive infrastructure disruption, such as the nuclear events that are currently unfolding in Japan.

> The 2004 Indian Ocean earthquake was an undersea megathrust earthquake that occurred at 00:58:53 UTC on Sunday, December 26, 2004, with an epicentre off the west coast of Sumatra, Indonesia. The quake itself is known by the scientific community as the Sumatra-Andaman earthquake.
>
> The earthquake was caused by subduction and triggered a series of devastating tsunamis along the coasts of most landmasses bordering the Indian Ocean, killing over 230,000 people in fourteen countries, and inundating coastal communities with waves up to 30 meters (100 feet) high. It was one of the deadliest natural disasters in recorded history. Indonesia was the hardest hit, followed by Sri Lanka, India, and Thailand.[3]

GROPPER's comments[4] on February 18, 2011 indicated that, "It can readily be understood that at special locations, for example at the beaches of Washington state, Oregon and California, where people may have their cell phones packed away, and will likely not have their NWR, that a low power AM station with flashing lights indicating a newly issued tsunami warning could potentially avert catastrophe."

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[3] 2005, February. "2004 Indian Ocean Earthquake and Tsunami." *Wikipedia, the Free Encyclopedia*. Web. 12 Mar. 2011. <http://en.wikipedia.org/wiki/2004_Indian_Ocean_earthquake_and_tsunami>.

[4] GROPPER Comments February 18, 2011 at 10-11.

All of the coastal regions of the United States should be considered at risk for tsunamis including, but not limited to, Hawaii, Guam, Alaska, the west coast, the gulf coast and the east coast[5].

Further, GROPPER's comments[6] included NOAA's tsunami warning procedure information is posted on NOAA's website:

> Once a tsunami watch or warning is issued:
> Upon receipt of tsunami watches and warnings, coastal National Weather Service (NWS) offices such as those in Seattle and Portland, activate the Emergency Alert System (EAS) via NOAA Weather Radio. All broadcasters (TV, AM/FM radio, cable TV) receive the tsunami EAS message simultaneously as well as those with weather radio receivers in homes, businesses, schools, health care facilities, etc. NOAA Weather Radio also activates the All-Hazard Alert Broadcast (AHAB) units located in remote coastal areas, alerting people in those isolated locations.
> Upon receipt of tsunami watch and warning messages, local emergency management officials (see Clallam County, WA as an example) can decide to activate the Emergency Alert System (EAS) to evacuate low-lying coastal areas in advance of the initial tsunami wave. Their EAS messages are also received by broadcasters, weather radio receivers and All Hazard Alert Broadcasts (AHABs) to help provide widespread dissemination of these messages. Follow the directions provided by your area emergency management officials - they will help save your life and those of your loved ones.[7]

For the March 10, 2011 earthquake and tsunami, NOAA's scientists did a fabulous job and worldwide tsunami warnings were issued in a timely manner. For example, the following is the text of one of the many tsunami warnings issued for this event:

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[5] Magnus, Edie. "Could a Tsunami Hit the U.S.? - Dateline NBC - Msnbc.com." Breaking News, Weather, Business, Health, Entertainment, Sports, Politics, Travel, Science, Technology, Local, US & World News - Msnbc.com. Web. 14 Mar. 2011. <http://www.msnbc.msn.com/id/6798858/ns/dateline_nbc/>.

[6] GROPPER Comments February 18, 2011 at 11.

[7] "NOAA Tsunami - How Does the Tsunami Warning System Work?" *NOAA Tsunami Website*. Web. 07 Jan. 2011. <http://www.tsunami.noaa.gov/warning_system_works.html>.

bulletin
tsunami message number 11
nws pacific tsunami warning center ewa beach hi
536 am hst fri mar 11 2011

to - civil defense in the state of hawaii

subject - tsunami warning supplement

a tsunami warning continues in effect for the state of hawaii.

an earthquake has occurred with these preliminary parameters

origin time - 0746 pm hst 10 mar 2011
coordinates - 38.3 north 142.4 east
location - near east coast of honshu japan
magnitude - 8.9 moment

measurements or reports of tsunami wave activity

gauge location	lat	lon	time	ampl	per
kapoho hi	19.5n	154.8w	1408z	0.06m / 0.2ft	14min
honolulu oahu	21.3n	157.9w	1329z	0.68m / 2.2ft	32min
hilo hawaii	19.7n	155.1w	1357z	1.32m / 4.3ft	24min
kahului maui	20.9n	156.5w	1340z	1.82m / 6.0ft	28min
lahaina hi	20.9n	156.7w	1335z	0.50m / 1.6ft	64min
mililii hi	19.2n	155.9w	1350z	0.67m / 2.2ft	12min
barbers pt hi	21.3n	158.1w	1323z	0.65m / 2.1ft	06min
honuapo hi	19.1n	155.6w	1340z	0.04m / 0.1ft	32min
haleiwa hi	21.6n	158.1w	1329z	1.09m / 3.6ft	38min
makapu'u hi	21.3n	157.7w	1312z	0.49m / 1.6ft	52min
kawaihae hawaii	20.0n	155.8w	1330z	0.85m / 2.8ft	56min
honokohau hi	19.7n	156.0w	1345z	0.44m / 1.4ft	10min
dart 51407	19.6n	156.5w	1322z	0.17m / 0.6ft	44min
nawiliwili kauai	22.0n	159.4w	1311z	0.64m / 2.1ft	26min
hanalei hi	22.2n	159.5w	1306z	0.85m / 2.8ft	28min
tern fr. frigate us	23.9n	166.3w	1224z	0.37m / 1.2ft	16min
malakal koror pw	7.3n	134.5e	1142z	0.10m / 0.3ft	40min
legaspi ph	13.1n	123.8e	1049z	0.26m / 0.8ft	58min
dart 46403	52.7n	156.9w	1128z	0.09m / 0.3ft	60min
dart 52402	11.7n	154.2e	0932z	0.29m / 0.9ft	22min
dart 46408	49.6n	169.9w	1030z	0.14m / 0.5ft	18min
dart 21414	48.9n	178.3e	0927z	0.18m / 0.6ft	24min
midway	28.2n	177.4w	1054z	1.26m / 4.1ft	12min
yap fm	9.5n	138.1e	0951z	0.18m / 0.6ft	92min
wake us	19.3n	166.6e	0928z	0.38m / 1.2ft	14min
saipan us	15.2n	145.7e	0916z	0.66m / 2.2ft	30min
tosashimizu shikoku	32.8n	133.0e	0751z	0.93m / 3.0ft	64min
omaezaki honshu jp	34.6n	138.2e	0660z	0.99m / 3.2ft	72min
dart 21418	38.7n	148.7e	0619z	1.07m / 3.5ft	06min

lat - latitude (n-north, s-south)
lon - longitude (e-east, w-west)

time - time of the measurement (z is utc is greenwich time) ampl -
tsunami amplitude measured relative to normal sea level.
it is ...not... crest-to-trough wave height.
values are given in both meters(m) and feet(ft).
per - period of time in minutes(min) from one wave to the next.

note - dart measurements are from the deep ocean and they are
generally much smaller than coastal measurements.

evaluation

a tsunami has been generated that could cause damage along
coastlines of all islands in the state of hawaii. urgent action should be
taken to protect lives and property.

a tsunami is a series of long ocean waves. each individual wave crest
can last 5 to 15 minutes or more and extensively flood coastal areas. the
danger can continue for many hours after the initial wave as subsequent
waves arrive. tsunami wave heights cannot be predicted and the first
wave may not be the largest.
tsunami waves efficiently wrap around islands. all shores are at risk no
matter which direction they face. the trough of a tsunami wave may
temporarily expose the seafloor but the area will quickly flood again.
extremely strong and unusual nearshore currents can accompany a
tsunami. debris picked up and carried by a tsunami amplifies its
destructive power. simultaneous high tides or high surf can significantly
increase the tsunami hazard.

the estimated arrival time in hawaii of the first tsunami wave is

0307 am hst fri 11 mar 2011

messages will be issued hourly or sooner as conditions warrant.
...sp...

As an event progresses, warnings are usually downgraded to advisories, for example:

bulletin
tsunami message number 31
nws west coast/alaska tsunami warning center palmer ak
409 am pst sat mar 12 2011

new updates since last message cancelled oregon advisory.

...the tsunami advisory continues in effect for the coastal areas of
california from alamitos bay california/20 miles se of l.a./ to the oregon-
california border...

...this message is information only for coastal areas of california from the
california-mexico border to alamitos bay california/20 miles se of l.a./...

...the tsunami advisory is canceled for the coastal areas of oregon from the oregon-california border to douglas-lane county line oregon/10 miles sw of florence/...

...this message is information only for coastal areas of oregon - washington - british columbia and alaska from douglas-lane county line oregon/10 miles sw of florence/ to attu alaska...

recommended actions
a tsunami has been generated which is expected to impact the advisory regions listed in the headline. persons in low-lying coastal areas should be alert to instructions from their local emergency officials. evacuations are only ordered by emergency response agencies.
- persons in tsunami advisory coastal areas should move out of the water... off the beach and out of harbors and marinas.

measurements or reports of tsunami activity new update: cancelled oregon advisory.

preliminary earthquake parameters
magnitude - 8.9
time - 2046 akst mar 10 2011
2146 pst mar 10 2011
0546 utc mar 11 2011
location - 38.3 north 142.4 east
- near east coast of honshu japan
depth - 12 miles/20 km

tsunami advisories mean that a tsunami capable of producing strong currents or waves dangerous to persons in or very near the water is expected. significant widespread inundation is not expected for areas under an advisory. currents may be hazardous to swimmers... boats... and coastal structures and may continue for several hours after the initial wave arrival.

pacific coastal regions outside california/ oregon/ washington/ british columbia and alaska should refer to the pacific tsunami warning center messages for information on this event at www.weather.gov/ptwc.

this message will be updated in 60 minutes or sooner if the situation warrants. the tsunami message will remain in effect until further notice. refer to the internet site wcatwc.arh.noaa.gov for more information.

county specific message:

/o.con.paaq.ts.y.0006.000000t0000z-000000t0000z/
coastal areas between and including alamitos bay california/20 miles se of l.a./ to the oregon-california border
409 am pst sat mar 12 2011

...the tsunami advisory continues in effect for the coastal areas of california from alamitos bay california/20 miles se of l.a./ to the oregon-california border...

> persons in tsunami advisory coastal areas should move out of the water... off the beach and out of harbors and marinas.
>
> tsunami advisories mean that a tsunami capable of producing strong currents or waves dangerous to persons in or very near water is imminent or expected. significant widespread inundation is not expected for areas in an advisory. tsunamis are a series of waves potentially dangerous several hours after initial arrival time.

These life saving warnings and advisories are broadcast by the NWS on NWR, and hopefully will be permitted by this rulemaking to be rebroadcast, in real time, on low power AM radio stations sited at shore locations.

The low power AM radio stations are a logical system for the final delivery of these critical messages as they can be powered by solar power, can be received on inexpensive, portable, and automobile radios, and can activate blinking lights to warn of a newly issued alert message.

As indicated in GROPPER's comments[8], both alert and routine NWR information needs to be permitted to be rebroadcast on low power AM as only the first alert burst will be EAS SAME tone alerted by the NWS on NWR, but important NON toned EAS SAME alert messages are repeatedly retransmitted while an alert is still in effect.

In order for the low power AM radio stations to be located at these critical shore locations, the siting requirements need to be relaxed.

[8] GROPPER Comments February 18, 2011 at 25.

> A number of comments asked that the rules requiring locating transmitters near interstates be relaxed. GROPPER agrees with the relaxation of rules to permit transmitters to be placed in important locations, such as at the beach to warn about tsunamis, as best determined by the end uses, without regard to being required to be sited near interstate highways.[9]

The FCC is thanked for giving consideration to these potentially life saving suggestions for system improvement.

Respectfully Submitted,

/Daniel R. Gropper/

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Date: March 14, 2011

[9] GROPPER Comments February 18, 2011 at 28.