

# Is Noise Displacement Killing Herring?

By Maurice Rees

Nova Scotia has some of the best oceans scientists in the world. However, they have not been able to determine why thousands of herring are dying in the Bay of Fundy and St Mary's Bay.

Scientists concluded it's not environmental or toxic. However, something caused massive kills in November and December. Just after Christmas CBC Radio interviewed Harold "Junior" Theriault, a Digby area life-long herring fisherman, who also served the Digby area as a Liberal MLA, who walks the beach every day and noticed dead herring started to appear in early November.

He's consulted weir fishermen, now in their 80's and 90's. They have seen nothing like it and it's unexplainable, why herring are showing up where they should not be at this time of year. Where might they have migrated from and what drove them there?

Has any testing of been done on tidal currents? Might herring, in this condition, have followed the tides from Grand Manan, Saint John, Cape Split, or Minas Channel?

The Cape Sharp Tidal turbine can be ruled out because if fish passed through and were damaged by the turbine's massive blades, scarring would be visible.

Junior Theriault said several times he picked up a herring tossing it 30-40 feet back into deeper water and each time it came back to shore.

On January 2nd, Junior Theriault reported, "Went to the beach this morning farther down bay. Herring still coming ashore. Doesn't look like it's going to stop anytime soon".

Loud noises can be problematic with marine life just as noise affects animals and humans. At a rock festival the level is about 120 decibels (120 dB's). However many tidal turbine noises reach 160 dB and in some cases exceed 170 dB.

A recent Digby area earthquake is ruled out, because massive kills of herring was occurring the previous month. One potential cause is "noise displacement". Displacement is used at airports and by blueberry farmers to scare a variety of birds from runways, flight paths and berry fields.

Noise displacement occurred in the Minas Channel last spring, when Big Moon arrived with several boats dragging electronic equipment for 10 days to conduct tests in the area of the FORCE site.

Jerry Taylor, whose weir is attached to Partridge Island says from the day testing started until it ended the volume of herring caught in his weir decreased 10,000-14,000 lbs per day. The next day catches rebounded to previous volumes. Darren Porter a weir fisherman in Bramber said herring turned away from the Minas Channel heading back down the Bay of Fundy. The day before Big Moon arrived Porter sent

soundings taken from a fish finder on a lobster boat in the Minas Passage to DFO. Fisherman wanted to record the screen being full top to bottom and side to side.

Is the Cape Sharp Tidal turbine emitting enough noise herring are suffering neurological damage which might affect breathing capabilities and disorientation?

Some online research provided the following information from two published studies: September 2011 "Effects of Tidal Turbine Noise on Fish" conducted on the west coast to study Chinook salmon contained this paragraph: "Fish Index of Trauma - Tissue damage injuries can range from non-lethal to lethal, depending on response to exposure to sound. Non-lethal injuries include effects such as scale loss, impact to sensory systems, and/or changes in behaviors that increase the risk of exposure to predation by piscivorous fish, marine mammals, and birds (Popper et al. 2004; Schreer et al. 2009). Lethal injuries include tissue laceration, embolisms, hemorrhage, and other injuries that severely compromise the physiology of the exposed fish".

Another study, "Review of current knowledge of underwater noise emissions from wave and tidal stream energy devices - the Crown Estate - August 2013" one table on Page 28, contained the following data: "In

Admiralty Inlet, Puget Sound an Open Hydro, 2 x 6m Open Hydro TEC had estimated maximum noise level of 172 dB. Used OpenHydro data from EMEC to estimate operational noise. [Copping et al 2013]".

If massive kills of herring and other sea creatures persist and no scientific reasons are found, difficult decisions will be necessary. Might it be necessary to remove the Cape Sharp Tidal Turbine from the water, for a period of time, to prove its noise level is or is not the ultimate cause?

**Maurice Rees publisher of The Shoreline Journal, Bass River and South Cumberland News, Parrsboro has over 50 years publishing experience. He can be reached at: [www.theshorelinejournal.com](http://www.theshorelinejournal.com)**



Join your friends for the kick off of the Long John Festival at Civic Square in Downtown Truro. There's live entertainment, refreshments and more. See the Long John Festival schedule on page 10 and 11 for details. (Photo submitted)

## "Work to Rule" Returned January 30<sup>TH</sup>

Government has reached a tentative agreement with the Nova Scotia Teachers Union.

The agreement was recommended to members by the union's provincial executive. Members will vote on the tentative agreement on February 8th. Many media reports indicate teachers are not pleased and many have indicated they will vote against the union executive's recommendation.

Once the tentative deal was announced, teachers called off "work to rule". However, on Friday, January 27th the union indicated "work to rule" would resume on Monday, January 30.

"I'm pleased to have reached this point," said Education and Early Childhood Development Minister Karen Casey when the agreement was announced.

"Both government and the union worked hard to come to this agreement. Now the members will have their opportunity to vote through ratification."

As part of the agreement, work to rule action was suspended and phased out beginning January 23. Government

has begun working with school boards and the union to begin that transition. The last agreement with teachers expired on July 31, 2015.

Details of the tentative agreement will not be released until 9,300 NSTU members have voted.

## February Church Services at Debert United

By Christine Urquhart

Church services for the Upper Londonderry Pastoral Charge will all be at 10am at Debert United Church for the month of February. The Annual Meeting of the Pastoral Charge will be held on Sunday February 26th. We hope that all members and adherents will attend.



## Do You Know Your Boundaries?

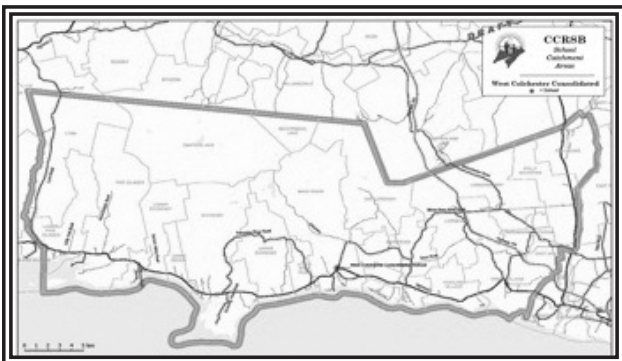
If you are new to the area or will be sending your little ones off to Grade Primary for the first time in September, do

you know what school boundaries you are in? Registration for all schools is now taking place. The school

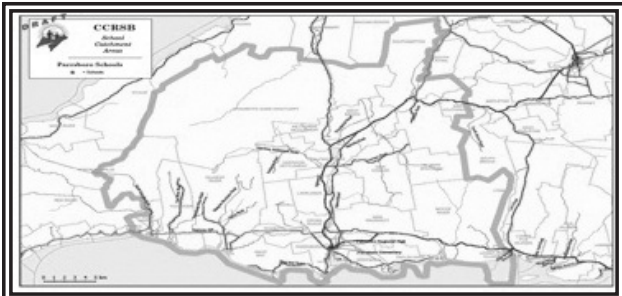
board designates the boundaries or "catchment" of where residents are to attend school. Generally, if students live in Colchester County they must register at West Colchester Consolidated, and students living in Cumberland County must register at Parrsboro Regional Elementary. Below are maps of both school areas.

Parents/guardians are encouraged to register their child(ren) as soon as possible. An appointment to register can be arranged by calling the school directly. The registration process takes about thirty minutes and the school staff will provide all the information you need to prepare for that exciting first day!

West Colchester Consolidated 902-647-3500



Parrsboro Regional Elementary (902) 254-5600



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