A.

TORNADO PROJECT SUMMARY SHEET

F = 2 N.S.

1. DATE AND TIME FRI 18·8·1876 1730 LOCAL

2. LOCATION OR PATH (attach map) ST PAUL'S ISLAND (OFF CAPE BRETON) (SW – NE)

3. PATH LENGTH ☐ NOT KNOWN ☐ <1mi; ☐ 1-4mi; ☐ 5-10mi; ☐ 11-50mi; ☐ LENGTH IF>50mi

4. PATH WIDTH ☐ 5. TORNADO PART OF SQUALL LINE? ☐ YES; ☐ NO; ☐ UNKNOWN:

6. ANY UNUSUAL COLORATION? ☐ YES; ☐ NO; ☐ UNKNOWN

7. ANY UNUSUAL SOUND? ☑ YES; ☐ NO; ☐ UNKNOWN

8. IF ANSWER TO 6 OR 7 YES, ELABORATE; 7. "heard a fearful rushing noise"

9. LIST ANY ASSOCIATED PHENOMENA (Such as hail, vivid lightning heavy rain, no rain, etc.)

10. TOTAL DAMAGE ESTIMATE $ U 11. TOTAL DEATHS 1

12. TOTAL INJURED none. 13. TOTAL HOMELESS U

14. LIST ALL REFERENCES Samuel C Campbell
LETTER FROM SUPERINTENDENT, ST PAUL'S ISLAND TO H.W. JOHNSTON, MARINE & FISHERIES DEPT.
CAPE BRETON TIMES, THUR SEPT 7, 1876 A.E.S ARCHIVES.

15. SUMMARIZE REMARKS PERTAINING TO (a) FUNNEL; (b) INTERESTING OR CAPRICIOUS EVENTS.

(a) The man in charge of the SW light saw 6 waterspouts, 4 of them passed over the island one of which struck the cluster of buildings. The superintendent gave the eyewitness account "I looked in the direction the noise was coming from.... at a distance of less than 1/4 mile from me... was sea, rocks, earth, trees and water, all whirling round high up in the air to a distance of more than a 100 ft."

(b) 5 buildings destroyed and other badly wrecked with the very foundations started. Several men were caught in the open, 2 threw themselves to the ground and escaped while one was hurled 300 ft to his death. In the midst of the storm, the Superintendent saw a grind-stone flying through the air. Two bridges carried away and smashed. A plough and stove carried over a house a distance of 200 ft.

CAPE BRETON TIMES. THURSDAY SEPTEMBER 7TH. 1876.

STORM DATE. ABOUT 5.30P.M., FRIDAY AUGUST 18TH. 1876.

THE ST. PAUL'S ISLAND DISASTER. (CLIPPING, A.E.S. ARCHIVES)

The following is a copy of a letter received by MR.H.W.JOHNSTON, agent of the MARINE and FISHERIES DEPARTMENT, from the superintendent of ST.PAUL'S ISLAND, giving a detailed account of the recent disaster at that place:-

ST. PAUL'S ISLAND. AUGUST 23RD. 1876.

HENRY W.JOHNSTON,ESQ., HALIFAX, N.S.,

SIR,—My telegram to you has already informed you of the fearful destruction done to this station on the 18th.inst, by a waterspout, and I now beg leave to send you a report of the disaster as follows:-

From the 1st. of August up to the 16th. we had no rain, nor a cloud to cover the scorching rays of the sun. The air at last was filled with a suffocating smoke as if the whole world was on fire.

On the 16th. the weather changed and the wind shifted round to the N.N.E., with rain squalls. The smoke which for some days back was so oppressive, cleared away and I looked for pleasant weather. On the 17th. the wind in the forenoon was from the East and a very hot sun; shifted in the afternoon to the S.S.West, with rain squalls. During the forenoon of the 18th. the wind was at about South, with fitful gusts and threatening clouds.In the afternoon the sky looked fearful wild and the clouds seemed to be flying towards each other and whirling round in every direction. About 4 o'clock p.m. we had some distant peals of thunder with some bright lightning; at about a quarter past four there was a very loud, crackling clap of thunder and a shower of rain. The wind changing round to the N.W., I went out and had a walk around the buildings to see that all was right after the thunder, when all at once I heard a fearful rushing noise(I think it was then about 5½ o'clock) I looked in the direction the noise was coming from, when I beheld a sight that made me tremble from head to foot. At a distance of less than a quarter of a mile from me; in a Westward direction, was sea, rocks, earth, trees and water, all whirling round high up in the air to a distance of more than a hundred feet. For a few moments I watched the whirling blast to see what direction it was likely to take. I saw it was crossing the cove towards me. By running in a North west direction I saw the safest way of escape, as it was going in a North East direction,

and would, I was sure, take the buildings in its course. In the dwelling-house was my poor feeble mother, deaf and dumb sister and servant- my wife and child were fortunately away. Leave them to their fate I could not. I had two men in the field close to the house. I ran to warn them: as I did so a squall of the whirling blast struck around me, carrying in its course a grind-stone. Stones flew up into the air above me. The main body of the blast was now close to me, and I ran with all my might for the dwelling-house, calling on the two men in the field to follow me. They both seemed feafully frightened. One of them, on hearing me call to him to make for the house, seemed to come to himself, and with all his might ran for the house, just in time to escape the destroying blast that followed. As we passed the threshold of the door the darkness of night surrounded us and the raging tempest burst around us, shaking the house from top to foundation and amidst falling plaster, chimneys, windows dashed in and windows broken into atoms, chairs, tables every-thing overturned, we as we thought took the last look at each other. As quick as it came it was over. All was again still and calm. The sun shone bright and fine. But, oh! what a wreck was left. With the smoke of the falling plaster we at first thought the house was on fire. Finding this not to be the case I made the best of my way outside. Two of my men when the waterspout first made its appearance were away some distance from the house. At last they were obliged to throw themselves on the ground and clinging to a bush were saved, the earth and rocks passing over them.

(poor Stephen McNeil)

Not so with the poor fellow who seemed not to heed my warning voice when I called on him to run for life. He was found after about an hours search at the door-step quite dead. He must have been killed on the spot where he stood and carried with the blast to where we found him, a distance of about 300 feet. On looking around I found that five buildings had been destroyed, not a particle of them left, with all their contents. The boat-house, provisions store and dwelling are still standing but feafully shattered. As for the dwelling house it is a perfect wreck, roof broken down in several places chimney all gone, foundations started, windows all broken, and inside the plaster has all fallen. The buildings destroyed altogether consisted of the house of refuse, barn, stables and outhouses one of which was about six hundred feet from the other and to the North East on top of the hill. Four of the buildings covered an area of 70 by 20 feet. Two bridges, over which I passed an

instant before were carried a distance of 400 feet and smashed into atoms. A rock 5 by 4 feet and 18 inches deep, was broken in three or four pieces. A plough and stove that were in the house of refuse along with a lot of farming utensils and a lot of cooking gear, carpenters tools, etc., were all swept away. The plough and stove went over the dwelling house and were found over 200 feet from where they were stored. The man in charge of the South Wset light told me he saw about 4 o'clock p.m., six waterspouts rising in a Westerly direction from the Island, one of which he saw from the humane station after the disaster. Two passed the north side and came over the island, one of which struck this station. The two that came on the island passed close to the South WSet station, but fortunately did no harm.

The deceased was a native of INGONISH, CAPE BRETON, 23 years of age and leaves a widowed mother and brothers and sisters to mourn their loss. He was eleven months with me.

Trusting that no time will be lost until men and materials are sent to make the place once more inhabitable.

I am , sir,

Your obediant servant

SAMUEL C.CAMPBELL.

Superintendent of ST. PAULS ISLAND.

Box 6, Site 15, R.R. 2,
Winterburn, Alberta,
T0E 2N0
November 25, 1988

Michael J. Newark, Head,
Building Climatology Unit,
Canadian Climate Centre,
Atmospheric Environment Service,
4905 Dufferin Street,
Downsview, Ontario
M3H 5T4

Dear Michael:

Thank you for your letter of November 7 with enclosures describing a tornado near Macrorie, Saskatchewan in 1937.

I had copied a brief account of that tornado from the Saskatoon Star-Phoenix, Sat. July 24, 1937, p.13. Evidently it occurred on July 21 as one of at least two on that day. According to my files another occurred at Duval and buildings were destroyed at Govan, Bladworth, Semans, Raymore, Craik, and Yorkton. The new data from Peter Elms adds considerably to the information that I have and I thank him for it.

All goes well here. I must confess that after I finished my report in October, 1987 I have made little or no progress on the subject. I did write a small chapter for a report on the Edmonton tornado by Alberta Public Safety Services. We hope this will be printed in early 1989.

I am not expanding my tornado geographical horizons but in the course of other work I found the following items:

1. "Tornado" at Digby, N.S., April 22, 1847. Item in "The Novascotian" (Halifax) taken from St. John "Morning News".

2. Six "waterspouts" observed on St.Paul Island, N.S., August 18, 1876. Five buildings destroyed, one death. Lengthy eyewitness account in "The Wesleyan" (Halifax), Sat. Sept. 9, 1876, p.1.

3. "Waterspout" seen by many in Port Hawkesbury, N.S., August 25, 1876 at about 5 p.m. Appeared to originate over a small lake between Cape Porcupine and Little Tracadie. From "The Wesleyan", Sat. Sept. 2,1876.

4. "Whirlwind" lifted about 100 pounds of hay 200 feet up at Yarmouth, N.S., about 4 p.m.,July 12, 1879. From "The Wesleyan", Sat., July 19, 1879, p.1.

THE DAILY GLOBE,TORONTO.THURSDAY AUGUST 31ST.1876.

STORM DATE.ABOUT 5.30P.M.,FRI.AUG.18TH.1876.

HALIFAX,N.S.,AUG.30TH. STEPHEN McNEIL was the name of the man killed by the waterspout at ST.PAUL'S ISLAND.A captain of a schooner at SYDNEY,from NEWFOUNDLAND,reports that the waterspout passed,but did not strike him,and that the sound was so great that a man could not be heard speaking alongside of him.He feared two vessels which he had seen a short time previous must have been struck by it.

EDITION 3

160 10′ 05′

11 12 13 14 15 16 17 18 19 20 21 22 23

ZONE 20

36 35 34 33 32 31 30 29 28 27

716000

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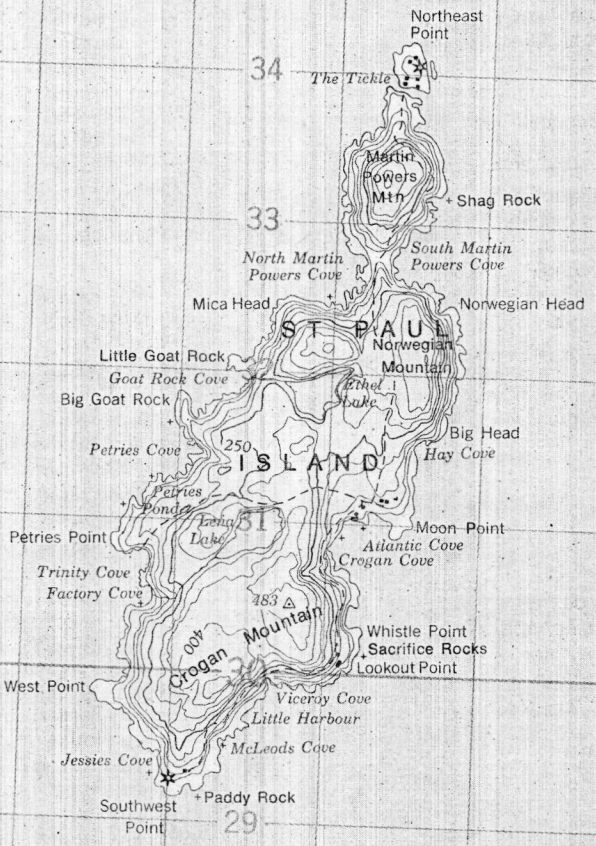

ST PAULS ISCAND TORNADO 10th ANNUAL REPORT 1877

CANADIAN DEPT. OF MARINE AND FISHERIES

ST. PAUL'S.

Since my last report no wrecks have occurred on this Island.

A full account was given last year of the destruction caused to the buildings and property on St. Paul's by the tornado which swept over the Island on 17th August, 1876. Men and materials were sent to make what temporary repairs were possible before the winter, the bulk of the work being reserved for the present year. The following is a summary of the work done there during the months of September, October and November, 1876.

No time was lost in making the necessary repairs on the dwelling house at the Humane Station, which was found to be damaged to a greater extent than reported by the Superintendent, Mr. Campbell. This building was wrecked and twisted, having settled down on the north side, in consequence of the sills being rotten, that it had to be raised up five inches to get it level. Little has been done at this building for 40 years. It was in a very bad state of repair and could not have been inhabited much longer. In the great whirlwind that struck the house, part of the foundation was carried away, the porch was wrecked and destroyed, the roof broken through in several places, and the chimney and plastering entirely destroyed.

Two joists had separated from the plates, and the repairs that were required were nearly equivalent to putting up a new house.

In excavating a foundation for the new addition to back of house, the rock was found to be so hard, that after working three days at it, it was decided that it would cost less to build the addition on the east end, which was done.

By this arrangement the house is made very convenient, the kitchen being in the new part, with two bedrooms in the attic and a porch on the north side. In consequence of the defective state of the roof and the house being occupied by the Superintendent's family the old roof could not be removed until the new one was built. By this arrangement the size of the upper rooms was increased by 2 feet in height and they are now good comfortable rooms.

The chimney was in such a bad condition that it had to be taken down and two single flue chimneys were built at each end. The repairs have been done in a thorough and substantial manner and the outside of the house is equal to a new one, having been new shingled. New window frames and sashes were put in as the old ones were rotten and broken. All the work was finished on the outside, but a considerable quantity of inside work remained to be done. Only one coat of plaster was given in consequence of the weather being so bad during the month of November, there being 22 stormy days. When the house is all finished it will stand many years without repairs.

Under the new addition a brick tank was built that will hold 2,000 gallons water. A new barn and stable have been finished complete, with stone foundation, and on the back of the barn a large shed to hold the oil barrels.

Nothing could be done to the provision store foundation on account of the frost, but the building was repaired and the roof made tight. The roof of the fog whistle building was repaired around the chimney smoke pipe. After the hard usage the boats received in landing the materials, they were very much cut up on the bottoms; they are also repaired.

The south-west dwelling was in very bad repair and could only be patched for the winter, new spouts were put up, the kitchen floor relaid and the fire places closed with brick work, as they were in a dangerous condition, having nothing but wooden fireboards.

Three days were spent on the north-east dwelling, making every thing as comfortable as time would permit.

A new bridge was built and the other one was put up temporary for the winter.

On 22nd June 1877, men and materials were again sent to the Island, they returned to Halifax 8th November. They were in charge of Mr. Moseley, and the following is his report of what as been done. This includes work at light stations as well as Humane Establishment.

Left Halifax on 22nd June and arrived at St. Paul's on 26th in steamer *Newfield*, and my crew of men were employed helping discharge the materials until 28th. After steamer had sailed at once got all the lumber up in a safe place out of the reach of the sea, and thence commenced to boat what material was wanted, to the south-west station. After this was done the crew were divided, some staying at the Humane Station and the remainder at the south-west.

Dwelling House. Humane Establishment.

Last fall was not able to complete the building, only finishing the outside and rough plaster a few rooms, but it is now thoroughly in order, having had three coats of plaster and the wood work two coats of paint. Put up a back porch 8x10, built a foundation under it with cement, also put a foundation under front porch. Put a door into the cellar, there being no way getting anything into it except through a small window. Also two windows in roof to light the bedrooms.

The house requires seven outside sashes 9x12 glass, they would have been made on the Island, but had no lumber fit for the purpose; it also requires a coat of paint, but had not fit weather during October, being very dark and gloomy.

Provision Store.

Removed the provision store from old site down 90 feet to head of hoisting bridge, shingled the roof, repaired sills and shingles in body of building, put a window in the end and a floor in loft, and put up steps. Built foundation with cement, repaired doors and lower floor.

Winch platform.

As the place where the provision store stood was in the way of hauling the boats, shifted it down, built a platform and put down a heavy piece of timber for a backing for the winch rope. Placed the winch on the platform and bolted it down to stringers. It now hauls in line with the slip, and four men can haul what was hard for eight before.

Barn.

Finished the barn and made good the doors and battened the body of the building.

Boat house.

Repaired shingles in body of the house, also built the foundation under three corners up, as they were all broken.

No. 2 Surf Boat.

Put in new keel, new stem, stern post, new rising, new knees.

Forge.

This building is still unfinished. The sides are boarded in, battened, roof board and chimney half up.

Magazine.

This is a small building, put up 130 feet in rear of the signal gun. It is boarded in, door made, but is unfinished.

Derrick for Hoisting Coal.

This is 22 feet in length and has a swing of 15 feet over the cliff, so that the coal bags can be hoisted out of boats and keep clear of the rocks and when hoisted high enough, swing into the coal shed.

In clearing away the temporary derrick that was in use, found the rock so full of shakes and seams, was obliged to move the new derrick 7 feet inland and pick the rocks away until a better foundation was secured. The cliff sloped so much in the outer end, that no mason work was put in for the derrick in case the frost might stay it, but instead a wooden blocking was used, bolting it to the rock and ballasting it

well, and placed the derrick on this foundation and fastened down with 1-inch bo
Under the outer end, where the derrick projected over the cliff, heavy shores fr
the rock were placed and braced and bolted, and it is now capable of lifting about
ton weight. Was obliged to clear away about 150 tons of loose shelly rock so t
the foundation might be secure.

Coal Shed.

This building is 33x19 feet and 9 feet post, and 13 feet rafter boarded a
battened, and lined up inside as high as plate.

There are ten iron knees in the building and upper and lower doors at seaw
end, and a large door for a horse and cart to drive in at the rear end, and the coal c
be put in either through the upper or lower door as may be required. The roof
shingled with pine shingles 4½ inches to the weather.

A large amount of blasting was done before a level could be got for the buildi
to stand on. As the derrick had to be moved inwards 7 feet, the shed had also to
moved the same distance. About 2,800 cubic feet of rock, besides turf and grav
had to be removed. The rock was very hard, being a red granite and weighing 1
lbs. to the cubic foot.

The underpinning was pointed with mortar, not having cement. Th
atmosphere is so penetrating that after a year it eats the strength out of lime mort
and then the mortar crumbles away.

On a place like St. Paul's all outside work should be done with Portland cemen
There was no plank to lay the floor, and as the Island staff would haul 60 tons coa
to che whistle house, boards were left to enable them to lay a floor to hold th
remainder of the coal, say 35 tons.

The coal shed will contain over 130 tons coals allowing 42 cubic feet to the to

South West Station.

There was as much work done here as would be required to build a new hous
The back and sills were rotted, the house had settled down on the south east en
and back, and was bulged out in the front at the eaves. Jackscrews were put under
the house and got it up as level as possible; put in new end sills, made a jog in them
putting part of them three feet above the old level, put in back sill the same heigh
and built up brick work. Now the sills are all above ground and the water canno
get at them. The stringers under the first floor were spliced and pieces of dea
spiked on to the joists and let them run into the wall and built them in with mason
work solid to the floor. The plate at the south east end was broken, and it being
too much work to take it out, an iron strap was placed over it and fastened wit
screw bolts.

Four iron knees were put in on each side to connect the roof with the sides of th
building to keep it from spreading any more, shingled outside, roof patched, an
two coats of paint put on. Previously the house was painted with red ochre, bu
there being no body in that, two coats of white lead mixed with boiled oil was given
Outside sashes were also fitted and glazed.

Built a porch 12 x 10 and 9 x 7 feet post, shed roof, sink in it, two doors and
platform round it.

There was considerable work in blasting for the porch, as it is very close to th
lighthouse, very small charges of powder were used and the holes well covered.
side of the house is all finished, new floors, new door frames, window casings, moul
ings, door casings, mouldings, bases, new doors, new lathed, two coats plaster and o
coat paint. A top was put on the chimney to see if it would draw better, but th
house is close under the cliff, that it always smokes with easterly winds. A bri
tank for water was also built in the cellar, capacity 1,400 gallons.

The south east corner of foundation was taken down, as it was undermined,
built it up solid, pointed the rest of the foundation, put up new spouts all round
house, connecting with tank in the cellar.

Light Tower.

Repaired shingles at base of house, painted it, renailed the shingles and pointed
the foundation with cement.

North-East Station.

Put up a new porch in front of house, with steps, laid new floor in kitchen and
made a connection between dwelling and lighthouse.

Pointed the foundation of house, repaired spouts, fitted and glazed and put up
outside sashes. The time was too short to put in new window frames, sashes or repair
the tank.

Light Tower.

Put a new sill under it, but is not finished. There requires two knees to be put
in from the corner posts to the sill, as one of the knees is all rotted away and the
other is all gone at the foot, but the lighthouse is safe without them. It is all shingled
outside, where it had been opened.

DOMINION STEAMERS.

The steamers "Newfield," and "Glendon" are under the charge of this Agency
and have been busily employed during the season, as will appear by the following
summary of their movements:

On 8th November 1877, the "Newfield" was detailed for services connected
with the Paris Exhibition, and the "Lady Head" was sent here for the winter. She
arrived here on the 8th instant.

Movements of the steamer "Newfield," Capt. J. N. Purdy, from 20th November, 1876, *to 6th November,* 1877.

On 20th November, in Pictou, taking on board supplies for St. Paul's Island,
and at 6.30 on 21st got under weigh, anchoring in Port Hawkesbury at 4 p.m. At
9 a.m. on the following morning got under weigh and at 11 a.m. passed "Grimes
Shoal," but the sea breaking heavily around it rendered it impossible to approach,
and at 2 p.m. anchored in Arichat Harbor.

On 23rd, 24th, and 25th, remained in Arichat, waiting a favorable opportunity of
getting to the "Grimes" Buoy. On the 26th, the sea still continuing heavy, received
orders, and at 7 a.m. got under weigh and anchored in Louisburg at 4 p.m. At
6 a.m. on 27th, got under weigh and anchored at North Sydney and commenced
taking on board supplies for St. Paul's and Ingonish Lights. On 28th, received on
board a further quantity of supplies, and on 29th took on board Mr. Campbell,
Superintendent of St. Paul's and his family, and Mr. McDougall, Light Keeper at
Ingonish, and the remainder of their stores. At 11 a.m. got under weigh and at 3
p.m. anchored off Ingonish Island in 9 fathoms, and landed Mr. McDougall and
his stores.

On 30th at 2 a.m. proceeded, and at 9 a.m. anchored in Atlantic Cove, St. Paul's
Island and landed Mr. Campbell, family and stores, received on board 7 carpenters
and 2 women. At noon under weigh and anchored in North Sydney at 7 p.m.

On 1st December a heavy gale prevailed from E. S. E. On 2nd the weather
having moderated, landed the passengers to be forwarded to Halifax per steamer
"George Shattuck." On 3rd, at 7 a.m. got under weigh, and anchored at
Whitehaven at 11 p.m., remaining there until 5 p.m. on 5th awaiting a favorable
chance to proceed to Sable Island. At 8 a.m., on 6th, anchored off the Main station
and commenced taking on board cranberries and some wrecked material. At 3 p.m.
the wind and sea increasing rendering it impossible to take on board any more
cargo—got under weigh and at 2 p.m. of 7th, anchored at Halifax and landed
freight and passengers.