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G.O., 7th September 1887, No. 399.

SEPTEMBER.

Cyclone Code.

Approving certain alterations in the —, and
directing its publication as revised.

26 p. only

10. 21. 9. 87

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GOVERNMENT OF MADRAS.
MARINE DEPARTMENT.

READ—the following paper :—

From J. H. TAYLOR, Esq., Lieutenant, R.N.R., Port Officer, Madras, to the Chief Secretary to Government, dated Madras, 30th August 1887, No. 7782.

I have the honor to state that the Madras Cyclone Code, sanctioned in G.O., dated 17th April 1884, No. 160, Marine, requires to be revised, in order that it may correspond with the directions for the use of storm signals, furnished by the Meteorological Reporter to the Government of India, recorded in G.O., dated 28th September 1886, Nos. 531, 532, Marine.

2. The portion referred to is Madras Cyclone Code, Section II, Marine Department, paragraph 4, and, as revised, it will stand as follows. The alterations are shown in *italics* :—

“IV. Whenever the Master Attendant, or, in his absence, the Senior Officer of the Marine Department present at Madras, shall have reason to apprehend the advent of dangerous weather, he will—

- (1) *if during daylight, direct the hoisting of a ball ;*
- (2) *if at night, three lamps suspended on the same line one above the other (in a vertical series) ;*
- (3) *if a cyclone is likely to approach the port, a drum by day ; and*
- (4) *two lamps similarly suspended by night.*

“Information of this will be given to the Deputy Assistant Adjutant-General and also to the Superintendent of the Marine Police, who will at once place himself, serjeant, boats' crews, and catamaran men under the orders of the Marine Department.”

3. Paragraph VI also requires to be altered, and I beg to submit the following to be substituted for the same :—

“VI. If it is decided by the Master Attendant or Senior Marine Officer present at Madras that the shipping shall be ordered to sea, *the following signals will be hoisted at the Marine Office flagstaff, signifying “cut or ship” :—*

- (1) *A cone by day, apex upwards.*
- (2) *Three good lights suspended triangularly, one at the mast head, and one at each yard arm, by night.*

“These signals will be repeated at the Fort, and intimation thereof will be sent to the Deputy Assistant Adjutant-General, who will in either case order seven (not an uncertain number as heretofore) guns to be fired seawards, with an interval of five minutes between each gun. It is, however, open to any Ship Commander to put to sea before this signal is made, should he deem such a course to be prudent with regard to his own ship ; and the signal is, moreover, not to be considered an imperative order. Each Commander must know best the trim of his own ship, and must exercise his own judgment as to whether he ought to remain at his anchors or proceed to sea.”

4. I have to solicit the sanction of Government to the above alterations, and to the early issue of fresh copies of the Madras Cyclone Code as now revised.

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ORDER—dated 7th September 1887, No. 399, Marine.

The proposed alterations are approved.

2. The Cyclone Code, as revised, will be published in the *Fort St. George Gazette*.

(True Extract.)

H. E. Stokes
Ag. Chief Secretary.

To the Port Officer, Madras.
" Military Department.
" Public Works Department.
" Chairman, Harbour Trust Board.
" Government Astronomer.
" Inspector-General of Police.
" Superintendent, Government Press.

E. A. A. Raitt.

ANNEXURE.

MADRAS CYCLONE CODE.*

SECTION I.

METEOROLOGICAL DEPARTMENT.

I. It will be the duty of the local Superintendents of the Meteorological Stations at Masulipatam, Negapatam, and Trichinopoly to telegraph promptly to the Government Astronomer and Meteorological Superintendent at Madras, in accordance with detailed instructions which have been issued by him to them, all abnormal, barometrical, temperature, and wind variations, which may indicate the likelihood, approach, prevalence, or passing away of a Gale or Cyclone. Arrangements have been made for similar information being furnished from Trincomallee and Pondicherry.

II. On the first observation, and during the continuance of "suspicious" or "dangerous" weather, the Government Astronomer will telegraph to his local Superintendents at all out-stations any observations, inquiries, directions, and warnings regarding the weather, which he may consider of possible utility. Orders have been given to ensure priority of despatch before all ordinary messages to his telegrams and their consequent replies.

III. Whenever the Astronomer shall have reason to apprehend the advent of a Gale or Cyclone he will at once, by telegram or otherwise, communicate warning to the Port Officer, and during the prevalence of such Gale or Cyclone he will continue to give such information regarding its varying phases as may be deemed by him to be of possible utility.

IV. As Cyclones after passing over Southern India from east to west have been known to be destructive to shipping on and beyond the West Coast, the Government Astronomer will communicate to the Port Officer such information as may be by him obtainable regarding the inland direction and progress of any future Cyclone, in order that timely warning of the apprehended danger may, when possible, be given to the local authorities along that coast, and may by them be given to the shipping.

SECTION II.

MARINE DEPARTMENT.

I. The Marine Department will enforce, as far as possible, a strict observance of the Port Rules in regard to the anchorage and berthing of ships, &c. A copy of these Rules will as heretofore be given to every Master of a Vessel arriving in the roads. From the middle of April till June, and from the middle of September till January, each Commander will also be furnished with a copy of Circular marked A, appended to this Code, regarding the precautions to be taken at the periodical changes of the monsoons.

II. As on the occasions of wrecks at Madras, the establishment of communication between the shore and stranded ships is, without the aid of rockets or other Artillery projectiles, sometimes practicable, two sets of life-saving apparatus, complete with hawsers, &c. (but without rockets), will be kept in charge of the Port Officer who will be responsible for their being in a constant state of readiness and efficiency, for their periodical inspection, and for his boats' crews being trained to their use.

III. The Port Officers at the Out-ports on the Eastern Coast of this Presidency will despatch by telegraph to the Port Officer at Madras prompt intimation of apprehended dangerous weather, and during the prevalence of such weather will continue, when practicable, to furnish information regarding its changes. Such information, when of an important character, as well as that which may be obtained by the Marine Department from ships or steamers, tending to establish the probable direction and progress of a cyclone centre, will be promptly forwarded by the telegraph or otherwise by the Port Officer to the Government Astronomer.

IV. Whenever the Port Officer, or in his absence the Senior Officer of the Marine Department present at Madras, shall have reason to apprehend the advent of dangerous weather, he will—

1. If, during day light, direct the hoisting of a ball.
2. If at night, three lamps suspended on the same line one above the other (in a vertical series).
3. If a cyclone is likely to approach the port, a drum by day; and
4. Two lamps similarly suspended by night.

Information of this will be given to the Deputy Assistant Adjutant-General and also to the Superintendent of the Marine Police, who will at once place himself, Serjeant, boats' crews, and catamaran men under the orders of the Marine Department.

The following arrangements will also be made:—

1. All Officers of the Marine Department will be in attendance.
2. The boat and catamaran men belonging to the Marine establishment will be assembled and held in readiness for immediate service.
3. The marine life-saving apparatus will be run out by the boatmen, so as to be ready for use either independently or in co-operation with the Ordnance rocket parties.
4. The boats' crews for night service will be mustered before dark, and will remain in the lower verandah of the Marine Office.
5. The Pier establishment will remain during the night at the Pier Office and will keep a good look-out along the Pier.

V. During the prevalence of "suspicious or dangerous weather" any important barometrical variations and any other information or advice that may be of possible utility will be, by signal or otherwise, communicated to the shipping by the Port Officer.

VI. If it is decided by the Port Officer or Senior Marine Officer present at Madras that the shipping shall be ordered to sea, the following signals will be hoisted at the Marine Office flagstaff, signifying "cut or slip":—

1. A cone by day, apex afterwards.
2. Three good lights suspended triangularly, one at the mast head and one at each yard arm by night.

These signals will be repeated at the Fort, and intimation thereof will be sent to the Deputy Assistant Adjutant-General, who will in either case order seven (not an uncertain number as heretofore) guns to be fired seawards with an interval of five minutes between each gun. It is, however, open to any Ship Commander to put to sea before this signal is made, should he deem such a course to be prudent with regard to his own ship; and the signal is, moreover, not to be considered an imperative order. Each Commander must know best the trim of his own ship, and must exercise his own judgment as to whether he ought to remain at his anchors or proceed to sea.

VII. When from a change in the direction or increased violence of the wind, from observing that ships are beginning to drive, or from any other reason, the Port Officer deems that imminent danger of actual wreck has arisen, he will intimate the fact to the Superintendent of Marine Police and to the Deputy Assistant Adjutant-General, who will order "the wreck signal" to be fired. This signal will be two guns fired landwards in quick succession and twice repeated with an interval of three minutes between each pair of guns.

VIII. The Senior Officer of the Marine Department will keep his officers and men together, or will distribute them along the beach as occasion may require. He will also point out to the Ordnance rocket parties those ships which first require assistance; to the Senior Officer of the troops where and how the Military working parties can be most usefully employed; and to the Senior Officer of Police where his men are likely to be most needed.

IX. The Officers of the Marine Department will wear their distinctive dress or uniform on wreck occasions.

X. The Port Officer at Madras will telegraph to the Port Officer at the other ports on both coasts of Southern India such warnings and indications of the progress of cyclones as may be of possible utility.

SECTION III.

POLICE.

I. On information from the Port Officer through the Superintendent of Marine Police being received by the Commissioner of Police of the "suspicious weather" signal having been hoisted, the latter will telegraph to Vellore, Salem, and Coimbatore, warning Police Officers to hold their respective reserves in readiness. On the receipt of the second telegram each of these reserves will be despatched by first train to Madras, where orders as to their duties will be issued to them.

II. The Commissioner will also send intelligence to St. Thomas' Mount, where the Police reserve will be held in readiness and await further orders.

III. Information will be at once circulated by the Commissioner to Divisional Inspectors, by whom beats will be immediately extended and other duties so arranged as to enable them to collect at their respective central stations certain forces, which in all will amount to about 500 men.

IV. The Marine Police boatmen on the "suspicious weather" signal being hoisted will, with their Superintendent and European Serjeant, be at once placed under the orders of the Port Officer.

V. On the Superintendent of Marine Police being informed by the Marine Authorities of imminent danger of wrecks occurring, or on hearing the wreck signal, he will promptly send intelligence to the Commissioner of Police, who will distribute marching orders to the divisional parties. Unless special circumstances should require a change of arrangements, the F and G Divisions and reserve will assemble under the Reserve Inspector at the Commissioner's Office and await further orders. The B, H, and C Divisions will be marched without delay to the Pier under the Deputy Commissioner. The D Division will be marched to the Beach near the Fort, and the E Division to the Ice House. Each party will be accompanied by two Sowars or mounted men.

VI. Should the services of the Police not be at once required, the party at the Pier will be sheltered in the verandah of the Custom House; that at the Fort in the arcade of the Arsenal; and that at the Ice House at the Inspector-General's Office.

VII. The entire Police Force will be under the Commissioner, who will consult the Marine Officers on the spot as to where the services of his men are likely to be emergently required. The Commissioner will issue whatever detailed orders may be requisite.

VIII. The Police will be mainly restricted to their own proper duties, *i.e.*, the maintenance of order, protecting personal or other property washed on shore; supervising the conveyance of the shipwrecked crews and passengers to the nearest shelter, and as soon after as circumstances will permit to the Hospital, Biden Home, or other places of refuge; bringing back the hammocks, doolies, and sick carts; guarding or removing the dead, &c. They are not to be employed in hauling ropes or recovering wreckage or cargo, save in emergent circumstances, when there are no or insufficient military or other working parties on the spot.

IX. The Commissioner of Police will see that duties are so apportioned as to enable the men to be relieved from the reserves as frequently as circumstances may render requisite.

X. All officers and men will be in uniform.

SECTION IV.

TROOPS IN GARRISON.

I. The Ordnance Department will as hitherto have charge of and will work the Rocket and Life-saving Apparatus, but portions of the Garrison Battery will be instructed and occasionally exercised in its use under the orders of the Commissary of Ordnance in charge of the Arsenal.

II. The two-day Marine signals to the shipping signifying "suspicious weather" (white flag with blue cross) and "cut or slip" (red flag with swallow tail), and the night signal of the approach of dangerous weather (three good lights, one at the mast-head and one at each yardarm) will be repeated at the Fort flagstaff. On the first signal being hoisted the Deputy Assistant Adjutant-General will warn the Ordnance, Medical, and Commissariat Departments of the fact, in order that all concerned may be held in readiness. On either of the last two signals being hoisted seven guns will be fired from the sea face of the Fort with an interval of five minutes between each gun. No further action will, however, be taken by the "Troops in Garrison" consequent on any of these signals.

III. In case of intimation being received from the Marine Department by the Deputy Assistant Adjutant-General of imminent danger or of actual shipwreck, or in case of such danger or shipwreck being observed from the Fort, the "wreck signal" will be fired. It will be two guns fired in quick succession from St. George's Bastion, which will be twice repeated at intervals of three minutes.

IV. When the "wreck signal" is rendered necessary, the Deputy Assistant Adjutant-General will send intimation to the Troops in Garrison and to the Ordnance, Medical, and Commissariat Departments; and the following arrangements will be carried out:—

1. Two mounted Non-Commissioned Officers and six Troopers of His Excellency the Governor's Body Guard will proceed to the Fort and place themselves under the orders of the Deputy Assistant Adjutant-General. They will be used as orderlies, as occasion may require, and when not actually wanted will be kept as much under shelter as convenient. Twelve additional men of the Body Guard will remain in their lines with their horses saddled in case their services as patrols may be needed to watch ships driving to points at some distance from the Fort, and to convey prompt intelligence of wreck or applications for aid along the extended line of beach to the Officers Commanding Troops and other authorities on the spot.
2. The Royal Artillery and British Regiment garrisoning the Fort will fall in in fatigue dress, and working parties will be detailed and promptly despatched to the scene of action as required. Before, however, the working parties leave the Fort inquiry will be made at the Arsenal as to whether any assistance in men from the Royal Artillery is required to supplement the Ordnance rocket parties; and application will, under the orders of the Officer Commanding Troops in Garrison, be made at the Arsenal for a supply of boat or firehooks, ropes of moderate length and thickness, grappling irons, &c., which will be under charge of the Officers Commanding the working parties, and will be used in saving life and property from the surf. Lanterns will also be applied for should the wrecks take place at night.
3. Half of the Native Infantry Regiment at Rayapuram will at once fall in, and, accompanied by its Medical Officer with medicines and surgical appliances, will march to the beach in fatigue dress. The remaining Native Infantry in Garrison will be restricted to their respective lines and await further orders.

V. It is not anticipated that the Police will be unable of themselves to keep perfect order along the beach, and adequately to perform all their appropriate duties, and, therefore, the action of the troops may be directed towards saving life and property; but they will be ready to keep the ground or aid the Police in any way that may be required.

VI. The Officers Commanding Troops will, wherever possible, consult with the Officers of the Marine Department on the spot as to where and how the services of their men can be most usefully employed, and the advice of the Marine Officers will be met with marked attention.

VII. Arrangements will be made for the relief, food, &c., of working parties by the Regiments and Departments concerned.

VIII. The Officer Commanding Troops in Garrison will make emergent requisition on the Officer in charge of the Camp Equipage Depot for such tents as may be required to shelter shipwrecked people.

IX. Officers on wreck duty will be in uniform, and Mounted Officers will have their horses with them.

SECTION V.

ORDNANCE DEPARTMENT.

I. The Commissary of Ordnance, Fort St. George, will be responsible that three sets of life-saving apparatus, with rockets, &c., complete, are at all times kept packed in carts ready for use in the arcade of the Arsenal, and that the Warrant and Non-Commissioned Officers of the Department are told off into rocket parties, and are instructed and periodically drilled to the practical use of the whole apparatus.

II. Inconvenience, danger, loss of life, and much damage of property were sustained in the Cyclone of May 1872 by there being no available means for dragging from the sea the logs, pieces of wreck, bales of goods, &c., which were dashing to and fro on the edge of the surf. There will, therefore, be held at all times in readiness by the Commissary of Ordnance a supply of boat and firehooks, grappling irons, and ropes of short lengths for issue as required to the Military working parties. Lanterns will also be kept ready for wreck night duties.

III. On the Commissary's receiving intelligence from the Deputy Assistant Adjutant-General that the "suspicious weather" signal has been hoisted, he will make arrangements to have one rocket party of Europeans with a detachment of Store Lascars in the Arsenal night and day till the danger passes off, or their services are required.

IV. On the "wreck signal" being fired, or on receiving intimation from the Deputy Assistant Adjutant-General of imminent danger to the shipping, the Warrant and Non-Commissioned Officers already told off in accordance with paragraph I will proceed in one, two, or three parties (as may be required), as speedily as possible, to the point or points where their services are most urgently required. These points, and the ships to which aid is to be first given, will be decided on by the Commissary in consultation with the Marine authorities on the spot, by whom he will be guided in the matter. If the rockets are used in the rescue of any ship's crew, the whole apparatus attached to the rocket cart will, under ordinary circumstances, be employed and be worked by the men of the Ordnance Department.

V. Two trollies, drawn by mules, have been ordered on occasions of wreck to be placed at the disposal of the Commissary of Ordnance by the Commissariat Department. They are intended to be used for the conveyance of rocket apparatus, hawsers, &c., should any wreck or wrecks take place at a distance from the Fort, such as St. Thomé or the Adyar; but, should they not be required for this purpose, they may be employed under his orders for any other necessary use connected with wreck work.

VI. The Commissary of Ordnance will, in communication with the Officer Commanding the District, arrange for the instruction of Detachments of the Battery of Royal Artillery in the use of the rocket and life-saving apparatus.

VII. He will apply to the Deputy Assistant Adjutant-General or Officer Commanding Royal Artillery, Fort, for any aid in men which he may emergently require in case of a cyclone.

VIII. When hawsers are necessarily left attached to wrecks, the Commissary of Ordnance or Senior Ordnance Officer will inform the Police of the fact.

IX. All Officers, Warrant and Non-Commissioned Officers and Store Lascars will be in uniform on wreck occasions.

X. The officer in charge of Camp Equipage Department will, in cases of wreck, promptly comply with emergent requisitions in writing from the Officer Commanding Troops in Garrison for tents for the shelter of the shipwrecked people.

SECTION VI.

MEDICAL DEPARTMENT.

I. On the "wreck signal" becoming necessary, the Deputy Assistant Adjutant-General will send intimation of the fact to the Deputy Surgeon-General, Eastern District, the Fort Surgeon and the Resident Assistant Surgeon at the General Hospital. The latter will warn the Surgeon and the Physician of the General Hospital, and similar warning will be given to the Superintendent of the Eye Infirmary at Vepery and to the Surgeon of the 1st District at Rayapuram by the Officers Commanding the Regiments at these places.

II. On hearing the guns of the "wreck signal," or on receipt of intimation from the Deputy Assistant Adjutant-General, these Medical Officers (except the Physician), taking with them a portion of their Establishments and the medicines and surgical appliances, which have been detailed by their Departmental Head, will forthwith proceed to the beach, and, in consultation with the Senior Marine and Military Officers on the spot, will distribute themselves to the various scenes of wreck or apprehended wreck, as occasion may require.

III. The Physician of the General Hospital will remain at the institution to receive and afford medical aid to all such as may be sent there from the beach for treatment.

IV. The Transport Officer will despatch to the beach as many sets of bearers as are available, with Doolies, Munchies or Dandies, to be placed at the disposal of the directing Military, Medical or Marine Officers present.

SECTION VII.

COMMISSARIAT DEPARTMENT.

I. On intimation being received from the Deputy Assistant Adjutant-General of imminent danger to shipping, or on the "wreck signal" being heard, two trollies drawn by mules will immediately proceed under a Staff Serjeant to the Arsenal and there await the orders of the Commissary of Ordnance.

II. Two other trollies, drawn by mules, each under care of a Warrant or Non-Commissioned Officer, and each containing an assortment (which will always be held in readiness in waterproof covers or cases) of blankets, towels, flannel banians, flannel drawers, biscuits, brandy, water, and drinking vessels, will be taken in the first place to the Marine Office, and thence, as directed by the Marine Officer, to the scenes of shipwreck, where the contents will, if required, be issued and used for the relief of shipwrecked persons under the orders of the directing Medical, Military, or Marine Officers present. As many sets of bearers as are available with hammocks slung on poles will at the same time be sent to the beach and will be placed at the disposal of the said Officers.

III. The Executive Commissariat Officer will also despatch a supply of draught bullocks with drivers to the Camp Equipage Depot for sick carts, which, under the orders of the Warrant or Non-Commissioned Officer in charge, will be taken to the beach as soon as the violence of the weather permits, and will also be placed at the disposal of the said officers.

A.

CIRCULAR.

The periodical season of uncertain weather on this coast having now arrived, the undersigned would hereby earnestly caution all Commanders of Vessels in these roads to keep their ships as much as possible prepared in every respect for standing to sea, at short notice, should the necessity arise for doing so.

1. Top-gallant masts, &c., with their rigging also, must be got on deck, flying jib-boom sent in, topsails and courses kept ready reefed, and everything on deck and below so arranged as to admit of being quickly secured on emergency. A good slip rope and buoy should be attached to the riding cable, and, as an additional precautionary measure, a stout warp also, to be used as a spring in canting the vessel, if found necessary, on being required to put to sea.

2. A prudent distance from the shore in respect to anchorage must now be observed, as a vessel lying nearer in at the time of bad weather here is, from exposure to the heavy ground swell, necessarily far less able to ride easily and securely than one well out.

3. Too much care cannot be paid in maintaining a perfectly clear berth, and Commanders should be mindful to keep their ships at as great a distance from each other as can conveniently be managed in order to avoid risks of collision by driving, or when slipping to stand to sea.

4. Every attention in the way of observation and look-out will be paid by this Department, and the usual warning and other signals promptly made, as need may call for. In order to prevent misapprehensions on the subject of signals, especial attention is requested to the circumstance that (during the prevalence of foul weather, however, only) when a *private* signal is intended to be made to a single vessel, besides hoisting her number in the first instance, No. 1 will be kept flying at the opposite yardarm. All other signals in which this said distinction is not made use of are to be considered as general, and obeyed accordingly.

5. It is very desirable that, during the prevalence of suspicious or threatening weather, Commanders should stay at nights on board their respective vessels, and also remain by them as much as possible until the uncertain period has been fairly passed over.

6. In event of wreck occurring, the usual appliances as put forth by the Board of Trade are adopted here, but should it be observed the rocket apparatus is not at once forthcoming, a line should be *immediately* sent on shore from the vessel by some kind of buoy, or other handy means, to which the tail block and double line will be attached by those on shore, or signals made as to what other steps must be carried out.

7. In conclusion, Commanders are earnestly reminded that, as intimated in the Port Instructions, "Commanding Officers are not to wait the display of signals if they deem it prudent to put to sea," it being in no way whatever obligatory for them so to await directions from the shore for standing to sea.

Port Officer's Office, Executive Department,
Madras, 188 .

Assistant Port Officer.

GOVERNMENT OF MADRAS.

MARINE DEPARTMENT.

READ—the following paper :—

From J. H. TAYLOR, Esq., Lieutenant, R.N.R., Port Officer, Madras, to the Chief Secretary to Government, dated Madras, 30th August 1887, No. 7782.

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2. The Cyclone Code, as revised, will be published in the *Fort St. George Gazette*.

(True Extract.)

H. E. STOKES,
Ag. Chief Secretary.

To the Port Officer, Madras.
 „ Military Department.
 „ Public Works Department.
 „ Chairman, Harbour Trust Board.
 „ Government Astronomer.
 „ Inspector-General of Police.
 „ Superintendent, Government Press.

Exd. A. Raiff.

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I. The Marine Department will enforce, as far as possible, a strict observance of the Port Rules in regard to the anchorage and berthing of ships, &c. A copy of these Rules will as heretofore be given to every Master of a Vessel arriving in the roads. From the middle of April till June, and from the middle of September till January, each Commander will also be furnished with a copy of Circular marked A, appended to this Code, regarding the precautions to be taken at the periodical changes of the monsoons.

II. As on the occasions of wrecks at Madras, the establishment of communication between the shore and stranded ships is, without the aid of rockets or other Artillery projectiles, sometimes practicable, two sets of life-saving apparatus, complete with hawsers, &c. (but without rockets), will be kept in charge of the Port Officer who will be responsible for their being in a constant state of readiness and efficiency, for their periodical inspection, and for his boats' crews being trained to their use.

III. The Port Officers at the Out-ports on the Eastern Coast of this Presidency will despatch by telegraph to the Port Officer at Madras prompt intimation of apprehended dangerous weather, and during the prevalence of such weather will continue, when practicable, to furnish information regarding its changes. Such information, when of an important character, as well as that which may be obtained by the Marine Department from ships or steamers, tending to establish the probable direction and progress of a cyclone centre, will be promptly forwarded by the telegraph or otherwise by the Port Officer to the Government Astronomer.

IV. Whenever the Port Officer, or in his absence the Senior Officer of the Marine Department present at Madras, shall have reason to apprehend the advent of dangerous weather, he will—

1. If, during day light, direct the hoisting of a ball.
2. If at night, three lamps suspended on the same line one above the other (in a vertical series).
3. If a cyclone is likely to approach the port, a drum by day; and
4. Two lamps similarly suspended by night.

Information of this will be given to the Deputy Assistant Adjutant-General and also to the Superintendent of the Marine Police, who will at once place himself, Serjeant, boats' crews, and cutamaram men under the orders of the Marine Department.

The following arrangements will also be made:—

1. All Officers of the Marine Department will be in attendance.
 2. The boat and catamaran men belonging to the Marine establishment will be assembled and held in readiness for immediate service.
 3. The marine life-saving apparatus will be run out by the boatmen, so as to be ready for use either independently or in co-operation with the Ordnance rocket parties.
 4. The boats' crews for night service will be mustered before dark, and will remain in the lower verandah of the Marine Office.
 5. The Pier establishment will remain during the night at the Pier Office and will keep a good look-out along the Pier.
- V. During the prevalence of "suspicious or dangerous weather" any important barometrical variations and any other information or advice that may be of possible utility will be, by signal or otherwise, communicated to the shipping by the Port Officer.

VI. If it is decided by the Port Officer or Senior Marine Officer present at Madras that the shipping shall be ordered to sea, the following signals will be hoisted at the Marine Office flagstaff, signifying "cut or slip":—

1. A cone by day, apex afterwards.
2. Three good lights suspended triangularly, one at the mast head and one at each yard arm by night.

These signals will be repeated at the Fort, and intimation thereof will be sent to the Deputy Assistant Adjutant-General, who will in either case order seven (not an uncertain number as heretofore) guns to be fired seawards with an interval of five minutes between each gun. It is, however, open to any Ship Commander to put to sea before this signal is made, should he deem such a course to be prudent with regard to his own ship; and the signal is, moreover, not to be considered an imperative order. Each Commander must know best the trim of his own ship, and must exercise his own judgment as to whether he ought to remain at his anchors or proceed to sea.

VII. When from a change in the direction or increased violence of the wind, from observing that ships are beginning to drive, or from any other reason, the Port Officer deems that imminent danger of actual wreck has arisen, he will intimate the fact to the Superintendent of Marine Police and to the Deputy Assistant Adjutant-General, who will order "the wreck signal" to be fired. This signal will be two guns fired landwards in quick succession and twice repeated with an interval of three minutes between each pair of guns.

VIII. The Senior Officer of the Marine Department will keep his officers and men together, or will distribute them along the beach as occasion may require. He will also point out to the Ordnance rocket parties those ships which first require assistance; to the Senior Officer of the troops where and how the Military working parties can be most usefully employed; and to the Senior Officer of Police where his men are likely to be most needed.

IX. The Officers of the Marine Department will wear their distinctive dress or uniform on wreck occasions.

X. The Port Officer at Madras will telegraph to the Port Officer at the other ports on both coasts of Southern India such warnings and indications of the progress of cyclones as may be of possible utility

SECTION III.

POLICE.

I. On information from the Port Officer through the Superintendent of Marine Police being received by the Commissioner of Police of the "suspicious weather" signal having been hoisted, the latter will telegraph to Vellore, Salem, and Coimbatore, warning Police Officers to hold their respective reserves in readiness. On the receipt of the second telegram each of these reserves will be despatched by first train to Madras, where orders as to their duties will be issued to them.

II. The Commissioner will also send intelligence to St. Thomas' Mount, where the Police reserve will be held in readiness and await further orders.

III. Information will be at once circulated by the Commissioner to Divisional Inspectors, by whom beats will be immediately extended and other duties so arranged as to enable them to collect at their respective central stations certain forces, which in all will amount to about 500 men.

IV. The Marine Police boatmen on the "suspicious weather" signal being hoisted will, with their Superintendent and European Serjeant, be at once placed under the orders of the Port Officer.

V. On the Superintendent of Marine Police being informed by the Marine Authorities of imminent danger of wrecks occurring, or on hearing the wreck signal, he will promptly send intelligence to the Commissioner of Police, who will distribute marching orders to the divisional parties. Unless special circumstances should require a change of arrangements, the F and G Divisions and reserve will assemble under the Reserve Inspector at the Commissioner's Office and await further orders. The B, H, and C Divisions will be marched without delay to the Pier under the Deputy Commissioner. The D Division will be marched to the Beach near the Fort, and the E Division to the Ice House. Each party will be accompanied by two Sowars or mounted men.

VI. Should the services of the Police not be at once required, the party at the Pier will be sheltered in the verandah of the Custom House; that at the Fort in the arcade of the Arsenal; and that at the Ice House at the Inspector-General's Office.

VII. The entire Police Force will be under the Commissioner, who will consult the Marine Officers on the spot as to where the services of his men are likely to be emergently required. The Commissioner will issue whatever detailed orders may be requisite.

VIII. The Police will be mainly restricted to their own proper duties, i.e., the maintenance of order, protecting personal or other property washed on shore; supervising the conveyance of the shipwrecked crews and passengers to the nearest shelter, and as soon after as circumstances will permit to the Hospital, Biden Home, or other places of refuge; bringing back the hammocks, doolies, and sick carts; guarding or removing the dead, &c. They are not to be employed in hauling ropes or recovering wreckage or cargo, save in emergent circumstances, when there are no or insufficient military or other working parties on the spot.

IX. The Commissioner of Police will see that duties are so apportioned as to enable the men to be relieved from the reserves as frequently as circumstances may render requisite.

X. All officers and men will be in uniform.

SECTION IV.

TROOPS IN GARRISON.

I. The Ordnance Department will as hitherto have charge of and will work the Rocket and Life-saving Apparatus, but portions of the Garrison Battery will be instructed and occasionally exercised in its use under the orders of the Commissary of Ordnance in charge of the Arsenal.

II. The two-day Marine signals to the shipping signifying "suspicious weather" (white flag with blue cross) and "cut or slip" (red flag with swallow tail), and the night signal of the approach of dangerous weather (three good lights, one at the mast-head and one at each yardarm) will be repeated at the Fort flagstaff. On the first signal being hoisted the Deputy Assistant Adjutant-General will warn the Ordnance, Medical, and Commissariat Departments of the fact, in order that all concerned may be held in readiness. On either of the last two signals being hoisted seven guns will be fired from the sea face of the Fort with an interval of five minutes between each gun. No further action will, however, be taken by the "Troops in Garrison" consequent on any of these signals.

III. In case of intimation being received from the Marine Department by the Deputy Assistant Adjutant-General of imminent danger or of actual shipwreck, or in case of such danger or shipwreck being observed from the Fort, the "wreck signal" will be fired. It will be two guns fired in quick succession from St. George's Bastion, which will be twice repeated at intervals of three minutes.

IV. When the "wreck signal" is rendered necessary, the Deputy Assistant Adjutant-General will send intimation to the Troops in Garrison and to the Ordnance, Medical, and Commissariat Departments; and the following arrangements will be carried out:—

1. Two mounted Non-Commissioned Officers and six Troopers of His Excellency the Governor's Body Guard will proceed to the Fort and place themselves under the orders of the Deputy Assistant Adjutant-General. They will be used as orderlies, as occasion may require, and when not actually wanted will be kept as much under shelter as convenient. Twelve additional men of the Body Guard will remain in their lines with their horses saddled in case their services as patrols may be needed to watch ships driving to points at some distance from the Fort, and to convey prompt intelligence of wreck or applications for aid along the extended line of beach to the Officers Commanding Troops and other authorities on the spot.
2. The Royal Artillery and British Regiment garrisoning the Fort will fall in in fatigue dress, and working parties will be detailed and promptly despatched to the scene of action as required. Before, however, the working parties leave the Fort inquiry will be made at the Arsenal as to whether any assistance in men from the Royal Artillery is required to supplement the Ordnance rocket parties; and application will, under the orders of the Officer Commanding Troops in Garrison, be made at the Arsenal for a supply of boat or firehooks, ropes of moderate length and thickness, grappling irons, &c., which will be under charge of the Officers Commanding the working parties, and will be used in saving life and property from the surf. Lanterns will also be applied for should the wrecks take place at night.
3. Half of the Native Infantry Regiment at Rayapuram will at once fall in, and, accompanied by its Medical Officer with medicines and surgical appliances, will march to the beach in fatigue dress. The remaining Native Infantry in Garrison will be restricted to their respective lines and await further orders.

V. It is not anticipated that the Police will be unable of themselves to keep perfect order along the beach, and adequately to perform all their appropriate duties, and, therefore, the action of the troops may be directed towards saving life and property; but they will be ready to keep the ground or aid the Police in any way that may be required.

VI. The Officers Commanding Troops will, wherever possible, consult with the Officers of the Marine Department on the spot as to where and how the services of their men can be most usefully employed, and the advice of the Marine Officers will be met with marked attention.

VII. Arrangements will be made for the relief, food, &c., of working parties by the Regiments and Departments concerned.

VIII. The Officer Commanding Troops in Garrison will make emergent requisition on the Officer in charge of the Camp Equipage Depot for such tents as may be required to shelter shipwrecked people.

IX. Officers on wreck duty will be in uniform, and Mounted Officers will have their horses with them.

SECTION V.

ORDNANCE DEPARTMENT.

I. The Commissary of Ordnance, Fort St. George, will be responsible that three sets of life-saving apparatus, with rockets, &c., complete, are at all times kept packed in carts ready for use in the arcade of the Arsenal, and that the Warrant and Non-Commissioned Officers of the Department are told off into rocket parties, and are instructed and periodically drilled to the practical use of the whole apparatus.

II. Inconvenience, danger, loss of life, and much damage of property were sustained in the Cyclone of May 1872 by there being no available means for dragging from the sea the logs, pieces of wreck, bales of goods, &c., which were dashing to and fro on the edge of the surf. There will, therefore, be held at all times in readiness by the Commissary of Ordnance a supply of boat and firehooks, grappling irons, and ropes of short lengths for issue as required to the Military working parties. Lanterns will also be kept ready for wreck night duties.

III. On the Commissary's receiving intelligence from the Deputy Assistant Adjutant-General that the "suspicious weather" signal has been hoisted, he will make arrangements to have one rocket party of Europeans with a detachment of Store Lascars in the Arsenal night and day till the danger passes off, or their services are required.

IV. On the "wreck signal" being fired, or on receiving intimation from the Deputy Assistant Adjutant-General of imminent danger to the shipping, the Warrant and Non-Commissioned Officers already told off in accordance with paragraph I will proceed in one, two, or three parties (as may be required), as speedily as possible, to the point or points where their services are most urgently required. These points, and the ships to which aid is to be first given, will be decided on by the Commissary in consultation with the Marine authorities on the spot, by whom he will be guided in the matter. If the rockets are used in the rescue of any ship's crew, the whole apparatus attached to the rocket cart will, under ordinary circumstances, be employed and be worked by the men of the Ordnance Department.

V. Two trollies, drawn by mules, have been ordered on occasions of wreck to be placed at the disposal of the Commissary of Ordnance by the Commissariat Department. They are intended to be used for the conveyance of rocket apparatus, hawsers, &c., should any wreck or wrecks take place at a distance from the Fort, such as St. Thomé or the Adyar; but, should they not be required for this purpose, they may be employed under his orders for any other necessary use connected with wreck work.

VI. The Commissary of Ordnance will, in communication with the Officer Commanding the District, arrange for the instruction of Detachments of the Battery of Royal Artillery in the use of the rocket and life-saving apparatus.

VII. He will apply to the Deputy Assistant Adjutant-General or Officer Commanding Royal Artillery, Fort, for any aid in men which he may emergently require in case of a cyclone.

VIII. When hawsers are necessarily left attached to wrecks, the Commissary of Ordnance or Senior Ordnance Officer will inform the Police of the fact.

IX. All Officers, Warrant and Non-Commissioned Officers and Store Lascars will be in uniform on wreck occasions.

X. The officer in charge of Camp Equipage Department will, in cases of wreck, promptly comply with emergent requisitions in writing from the Officer Commanding Troops in Garrison for tents for the shelter of the shipwrecked people.

SECTION VI.

MEDICAL DEPARTMENT.

I. On the "wreck signal" becoming necessary, the Deputy Assistant Adjutant-General will send intimation of the fact to the Deputy Surgeon-General, Eastern District, the Fort Surgeon and the Resident Assistant Surgeon at the General Hospital. The latter will warn the Surgeon and the Physician of the General Hospital, and similar warning will be given to the Superintendent of the Eye Infirmary at Vepery and to the Surgeon of the 1st District at Rayapuram by the Officers Commanding the Regiments at these places.

II. On hearing the guns of the "wreck signal" or on receipt of intimation from the Deputy Assistant Adjutant-General, these Medical Officers (except the Physician), taking with them a portion of their Establishments and the medicines and surgical appliances, which have been detailed by their Departmental Head, will forthwith proceed to the beach, and, in consultation with the Senior Marine and Military Officers on the spot, will distribute themselves to the various scenes of wreck or apprehended wreck, as occasion may require.

III. The Physician of the General Hospital will remain at the institution to receive and afford medical aid to all such as may be sent there from the beach for treatment.

IV. The Transport Officer will despatch to the beach as many sets of bearers as are available, with Doolies, Muncheds or Dandies, to be placed at the disposal of the directing Military, Medical or Marine Officers present.

SECTION VII.

COMMISSARIAT DEPARTMENT.

I. On intimation being received from the Deputy Assistant Adjutant-General of imminent danger to shipping, or on the "wreck signal" being heard, two trollies drawn by mules will immediately proceed under a Staff Serjeant to the Arsenal and there await the orders of the Commissary of Ordnance.

II. Two other trollies, drawn by mules, each under care of a Warrant or Non-Commissioned Officer, and each containing an assortment (which will always be held in readiness in waterproof covers or cases) of blankets, towels, flannel banyans, flannel drawers, biscuits, brandy, water, and drinking vessels, will be taken in the first place to the Marine Office, and thence, as directed by the Marine Officer, to the scenes of shipwreck, where the contents will, if required, be issued and used for the relief of shipwrecked persons under the orders of the directing Medical, Military, or Marine Officers present. As many sets of bearers as are available with hammocks slung on poles will at the same time be sent to the beach and will be placed at the disposal of the said Officers.

III. The Executive Commissariat Officer will also despatch a supply of draught bullocks with drivers to the Camp Equipage Depot for sick carts, which, under the orders of the Warrant or Non-Commissioned Officer in charge, will be taken to the beach as soon as the violence of the weather permits, and will also be placed at the disposal of the said officers.

A.

CIRCULAR.

The periodical season of uncertain weather on this coast having now arrived, the undersigned would hereby earnestly caution all Commanders of Vessels in these roads to keep their ships as much as possible prepared in every respect for standing to sea, at short notice, should the necessity arise for doing so.

1. Top-gallant masts, &c., with their rigging also, must be got on deck, flying jib-boom sent in, topsails and courses kept ready reefed, and everything on deck and below so arranged as to admit of being quickly secured on emergency. A good slip rope and buoy should be attached to the riding cable, and, as an additional precautionary measure, a stout warp also, to be used as a spring in canting the vessel, if found necessary, on being required to put to sea.

2. A prudent distance from the shore in respect to anchorage must now be observed, as a vessel lying nearer in at the time of bad weather here is, from exposure to the heavy ground swell, necessarily far less able to ride easily and securely than one well out.

3. Too much care cannot be paid in maintaining a perfectly clear berth, and Commanders should be mindful to keep their ships at as great a distance from each other as can conveniently be managed in order to avoid risks of collision by driving, or when slipping to stand to sea.

4. Every attention in the way of observation and look-out will be paid by this Department, and the usual warning and other signals promptly made, as need may call for. In order to prevent misapprehensions on the subject of signals, especial attention is requested to the circumstance that (during the prevalence of foul weather, however, only) when a *private* signal is intended to be made to a single vessel, besides hoisting her number in the first instance, No. 1 will be kept flying at the opposite yardarm. All other signals in which this said distinction is not made use of are to be considered as general, and obeyed accordingly.

5. It is very desirable that, during the prevalence of suspicious or threatening weather, Commanders should stay at nights on board their respective vessels, and also remain by them as much as possible until the uncertain period has been fairly passed over.

6. In event of wreck occurring, the usual appliances as put forth by the Board of Trade are adopted here, but should it be observed the rocket apparatus is not at once forthcoming, a line should be *immediately* sent on shore from the vessel by some kind of buoy, or other handy means, to which the tail block and double line will be attached by those on shore, or signals made as to what other steps must be carried out.

7. In conclusion, Commanders are earnestly reminded that, as intimated in the Port Instructions, "Commanding Officers are not to wait the display of signals if they deem it prudent to put to sea," it being in no way whatever obligatory for them so to await directions from the shore for standing to sea.

Port Officer's Office, Executive Department,
Madras, 188 .

Assistant Port Officer.

P.W.D.
Govt. of 1887 Madras.
MARINE.

7TH SEPTEMBER 1887, No. 399, MARINE.

GOVERNMENT OF MADRAS.

MARINE DEPARTMENT.

READ—the following paper :—

From J. H. TAYLOR, Esq., Lieutenant, R.N.R., Port Officer, Madras, to the Chief Secretary to Government, dated Madras, 30th August 1887, No. 7782.

I have the honor to state that the Madras Cyclone Code, sanctioned in G.O., dated 17th April 1884, No. 160, Marine, requires to be revised, in order that it may correspond with the directions for the use of storm signals, furnished by the Meteorological Reporter to the Government of India, recorded in G.O., dated 28th September 1886, Nos. 531, 532, Marine.

2. The portion referred to is Madras Cyclone Code, Section II, Marine Department, paragraph 4, and, as revised, it will stand as follows. The alterations are shown in *italics* :—

“IV. Whenever the Master Attendant, or, in his absence, the Senior Officer of the Marine Department present at Madras, shall have reason to apprehend the advent of dangerous weather, he will—

- (1) *if during daylight, direct the hoisting of a ball ;*
- (2) *if at night, three lamps suspended on the same line one above the other (in a vertical series) ;*
- (3) *if a cyclone is likely to approach the port, a drum by day ; and*
- (4) *two lamps similarly suspended by night.*

“Information of this will be given to the Deputy Assistant Adjutant-General and also to the Superintendent of the Marine Police, who will at once place himself, serjeant, boats' crews, and catamaran men under the orders of the Marine Department.”

3. Paragraph VI also requires to be altered, and I beg to submit the following to be substituted for the same :—

“VI. If it is decided by the Master Attendant or Senior Marine Officer present at Madras that the shipping shall be ordered to sea, *the following signals will be hoisted at the Marine Office flagstaff, signifying “cut or ship” :—*

- (1) *A cone by day, apex upwards.*
- (2) *Three good lights suspended triangularly, one at the mast head, and one at each yard arm, by night.*

“These signals will be repeated at the Fort, and intimation thereof will be sent to the Deputy Assistant Adjutant-General, who will in either case order seven (not an uncertain number as heretofore) guns to be fired seawards, with an interval of five minutes between each gun. It is, however, open to any Ship Commander to put to sea before this signal is made, should he deem such a course to be prudent with regard to his own ship ; and the signal is, moreover, not to be considered an imperative order. Each Commander must know best the trim of his own ship, and must exercise his own judgment as to whether he ought to remain at his anchors or proceed to sea.”

4. I have to solicit the sanction of Government to the above alterations, and to the early issue of fresh copies of the Madras Cyclone Code as now revised.

Issued

Recd.

Encl.

G.O., 7th September 1887, No. 399.

SEPTEMBER.

Cyclone Code.

Approving certain alterations in the —, and directing its publication as revised.

with order

ORDER—dated 7th September 1887, No. 399, Marine.

The proposed alterations are approved.

2. The Cyclone Code, as revised, will be published in the *Fort St. George Gazette*.

(True Extract.)

H. E. STOKES,
Ag. Chief Secretary.

To the Port Officer, Madras.
" Military Department.
" Public Works Department.
" Chairman, Harbour Trust Board.
" Government Astronomer.
" Inspector-General of Police.
" Superintendent, Government Press.

Exd. A. Raitt.

ANNEXURE.

MADRAS CYCLONE CODE.*

SECTION I.

METEOROLOGICAL DEPARTMENT.

I. It will be the duty of the local Superintendents of the Meteorological Stations at Masulipatam, Negapatam, and Trichinopoly to telegraph promptly to the Government Astronomer and Meteorological Superintendent at Madras, in accordance with detailed instructions which have been issued by him to them, all abnormal, barometrical, temperature, and wind variations, which may indicate the likelihood, approach, prevalence, or passing away of a Gale or Cyclone. Arrangements have been made for similar information being furnished from Trincomallee and Pondicherry.

II. On the first observation, and during the continuance of "suspicious" or "dangerous" weather, the Government Astronomer will telegraph to his local Superintendents at all out-stations any observations, inquiries, directions, and warnings regarding the weather, which he may consider of possible utility. Orders have been given to ensure priority of despatch before all ordinary messages to his telegrams and their consequent replies.

III. Whenever the Astronomer shall have reason to apprehend the advent of a Gale or Cyclone he will at once, by telegram or otherwise, communicate warning to the Port Officer, and during the prevalence of such Gale or Cyclone he will continue to give such information regarding its varying phases as may be deemed by him to be of possible utility.

IV. As Cyclones after passing over Southern India from east to west have been known to be destructive to shipping on and beyond the West Coast, the Government Astronomer will communicate to the Port Officer such information as may be by him obtainable regarding the inland direction and progress of any future Cyclone, in order that timely warning of the apprehended danger may, when possible, be given to the local authorities along that coast, and may by them be given to the shipping.

SECTION II.

MARINE DEPARTMENT.

I. The Marine Department will enforce, as far as possible, a strict observance of the Port Rules in regard to the anchorage and berthing of ships, &c. A copy of these Rules will as heretofore be given to every Master of a Vessel arriving in the roads. From the middle of April till June, and from the middle of September till January, each Commander will also be furnished with a copy of Circular marked A, appended to this Code, regarding the precautions to be taken at the periodical changes of the monsoons.

II. As on the occasions of wrecks at Madras, the establishment of communication between the shore and stranded ships is, without the aid of rockets or other Artillery projectiles, sometimes practicable, two sets of life-saving apparatus, complete with hawsers, &c. (but without rockets), will be kept in charge of the Port Officer who will be responsible for their being in a constant state of readiness and efficiency, for their periodical inspection, and for his boats' crews being trained to their use.

III. The Port Officers at the Out-ports on the Eastern Coast of this Presidency will despatch by telegraph to the Port Officer at Madras prompt intimation of apprehended dangerous weather, and during the prevalence of such weather will continue, when practicable, to furnish information regarding its changes. Such information, when of an important character, as well as that which may be obtained by the Marine Department from ships or steamers, tending to establish the probable direction and progress of a cyclone centre, will be promptly forwarded by the telegraph or otherwise by the Port Officer to the Government Astronomer.

IV. Whenever the Port Officer, or in his absence the Senior Officer of the Marine Department present at Madras, shall have reason to apprehend the advent of dangerous weather, he will—

1. If, during day light, direct the hoisting of a ball.
2. If at night, three lamps suspended on the same line one above the other (in a vertical series).
3. If a cyclone is likely to approach the port, a drum by day; and
4. Two lamps similarly suspended by night.

Information of this will be given to the Deputy Assistant Adjutant-General and also to the Superintendent of the Marine Police, who will at once place himself, Serjeant, boats' crews, and catamaran men under the orders of the Marine Department.

The following arrangements will also be made :—

1. All Officers of the Marine Department will be in attendance.
2. The boat and catamaran men belonging to the Marine establishment will be assembled and held in readiness for immediate service.
3. The marine life-saving apparatus will be run out by the boatmen, so as to be ready for use either independently or in co-operation with the Ordnance rocket parties.
4. The boats' crews for night service will be mustered before dark, and will remain in the lower verandah of the Marine Office.
5. The Pier establishment will remain during the night at the Pier Office and will keep a good look-out along the Pier.

V. During the prevalence of "suspicious or dangerous weather" any important barometrical variations and any other information or advice that may be of possible utility will be, by signal or otherwise, communicated to the shipping by the Port Officer.

VI. If it is decided by the Port Officer or Senior Marine Officer present at Madras that the shipping shall be ordered to sea, the following signals will be hoisted at the Marine Office flagstaff, signifying "cut or slip :"—

1. A cone by day, apex afterwards.
2. Three good lights suspended triangularly, one at the mast head and one at each yard arm by night.

These signals will be repeated at the Fort, and intimation thereof will be sent to the Deputy Assistant Adjutant-General, who will in either case order seven (not an uncertain number as heretofore) guns to be fired seawards with an interval of five minutes between each gun. It is, however, open to any Ship Commander to put to sea before this signal is made, should he deem such a course to be prudent with regard to his own ship; and the signal is, moreover, not to be considered an imperative order. Each Commander must know best the trim of his own ship, and must exercise his own judgment as to whether he ought to remain at his anchors or proceed to sea.

VII. When from a change in the direction or increased violence of the wind, from observing that ships are beginning to drive, or from any other reason, the Port Officer deems that imminent danger of actual wreck has arisen, he will intimate the fact to the Superintendent of Marine Police and to the Deputy Assistant Adjutant-General, who will order "the wreck signal" to be fired. This signal will be two guns fired landwards in quick succession and twice repeated with an interval of three minutes between each pair of guns.

VIII. The Senior Officer of the Marine Department will keep his officers and men together, or will distribute them along the beach as occasion may require. He will also point out to the Ordnance rocket parties those ships which first require assistance; to the Senior Officer of the troops where and how the Military working parties can be most usefully employed; and to the Senior Officer of Police where his men are likely to be most needed.

IX. The Officers of the Marine Department will wear their distinctive dress or uniform on wreck occasions.

X. The Port Officer at Madras will telegraph to the Port Officer at the other ports on both coasts of Southern India such warnings and indications of the progress of cyclones as may be of possible utility

SECTION III.

POLICE.

I. On information from the Port Officer through the Superintendent of Marine Police being received by the Commissioner of Police of the "suspicious weather" signal having been hoisted, the latter will telegraph to Vellore, Salem, and Coimbatore, warning Police Officers to hold their respective reserves in readiness. On the receipt of the second telegram each of these reserves will be despatched by first train to Madras, where orders as to their duties will be issued to them.

II. The Commissioner will also send intelligence to St. Thomas' Mount, where the Police reserve will be held in readiness and await further orders.

III. Information will be at once circulated by the Commissioner to Divisional Inspectors, by whom beats will be immediately extended and other duties so arranged as to enable them to collect at their respective central stations certain forces, which in all will amount to about 500 men.

IV. The Marine Police boatmen on the "suspicious weather" signal being hoisted will, with their Superintendent and European Serjeant, be at once placed under the orders of the Port Officer.

V. On the Superintendent of Marine Police being informed by the Marine Authorities of imminent danger of wrecks occurring, or on hearing the wreck signal, he will promptly send intelligence to the Commissioner of Police, who will distribute marching orders to the divisional parties. Unless special circumstances should require a change of arrangements, the F and G Divisions and reserve will assemble under the Reserve Inspector at the Commissioner's Office and await further orders. The B, H, and C Divisions will be marched without delay to the Pier under the Deputy Commissioner. The D Division will be marched to the Beach near the Fort, and the E Division to the Ice House. Each party will be accompanied by two Sowars or mounted men.

VI. Should the services of the Police not be at once required, the party at the Pier will be sheltered in the verandah of the Custom House; that at the Fort in the arcade of the Arsenal; and that at the Ice House at the Inspector-General's Office.

VII. The entire Police Force will be under the Commissioner, who will consult the Marine Officers on the spot as to where the services of his men are likely to be emergently required. The Commissioner will issue whatever detailed orders may be requisite.

VIII. The Police will be mainly restricted to their own proper duties, i.e., the maintenance of order, protecting personal or other property washed on shore; supervising the conveyance of the shipwrecked crews and passengers to the nearest shelter, and as soon after as circumstances will permit to the Hospital, Biden Home, or other places of refuge; bringing back the hammocks, doolies, and sick carts; guarding or removing the dead, &c. They are not to be employed in hauling ropes or recovering wreckage or cargo, save in emergent circumstances, when there are no or insufficient military or other working parties on the spot.

IX. The Commissioner of Police will see that duties are so apportioned as to enable the men to be relieved from the reserves as frequently as circumstances may render requisite.

X. All officers and men will be in uniform.

SECTION IV.

TROOPS IN GARRISON.

I. The Ordnance Department will as hitherto have charge of and will work the Rocket and Life-saving Apparatus, but portions of the Garrison Battery will be instructed and occasionally exercised in its use under the orders of the Commissary of Ordnance in charge of the Arsenal.

II. The two-day Marine signals to the shipping signifying "suspicious weather" (white flag with blue cross) and "cut or slip" (red flag with swallow tail), and the night signal of the approach of dangerous weather (three good lights, one at the mast-head and one at each yardarm) will be repeated at the Fort flagstaff. On the first signal being hoisted the Deputy Assistant Adjutant-General will warn the Ordnance, Medical, and Commissariat Departments of the fact, in order that all concerned may be held in readiness. On either of the last two signals being hoisted seven guns will be fired from the sea face of the Fort with an interval of five minutes between each gun. No further action will, however, be taken by the "Troops in Garrison" consequent on any of these signals.

III. In case of intimation being received from the Marine Department by the Deputy Assistant Adjutant-General of imminent danger or of actual shipwreck, or in case of such danger or shipwreck being observed from the Fort, the "wreck signal" will be fired. It will be two guns fired in quick succession from St. George's Bastion, which will be twice repeated at intervals of three minutes.

IV. When the "wreck signal" is rendered necessary, the Deputy Assistant Adjutant-General will send intimation to the Troops in Garrison and to the Ordnance, Medical, and Commissariat Departments; and the following arrangements will be carried out :—

1. Two mounted Non-Commissioned Officers and six Troopers of His Excellency the Governor's Body Guard will proceed to the Fort and place themselves under the orders of the Deputy Assistant Adjutant-General. They will be used as orderlies, as occasion may require, and when not actually wanted will be kept as much under shelter as convenient. Twelve additional men of the Body Guard will remain in their lines with their horses saddled in case their services as patrols may be needed to watch ships driving to points at some distance from the Fort, and to convey prompt intelligence of wreck or applications for aid along the extended line of beach to the Officers Commanding Troops and other authorities on the spot.
2. The Royal Artillery and British Regiment garrisoning the Fort will fall in in fatigue dress, and working parties will be detailed and promptly despatched to the scene of action as required. Before, however, the working parties leave the Fort inquiry will be made at the Arsenal as to whether any assistance in men from the Royal Artillery is required to supplement the Ordnance rocket parties; and application will, under the orders of the Officer Commanding Troops in Garrison, be made at the Arsenal for a supply of boat or firehooks, ropes of moderate length and thickness, grappling irons, &c., which will be under charge of the Officers Commanding the working parties, and will be used in saving life and property from the surf. Lanterns will also be applied for should the wrecks take place at night.
3. Half of the Native Infantry Regiment at Rayapuram will at once fall in, and, accompanied by its Medical Officer with medicines and surgical appliances, will march to the beach in fatigue dress. The remaining Native Infantry in Garrison will be restricted to their respective lines and await further orders.

V. It is not anticipated that the Police will be unable of themselves to keep perfect order along the beach, and adequately to perform all their appropriate duties, and, therefore, the action of the troops may be directed towards saving life and property; but they will be ready to keep the ground or aid the Police in any way that may be required.

VI. The Officers Commanding Troops will, wherever possible, consult with the Officers of the Marine Department on the spot as to where and how the services of their men can be most usefully employed, and the advice of the Marine Officers will be met with marked attention.

VII. Arrangements will be made for the relief, food, &c., of working parties by the Regiments and Departments concerned.

VIII. The Officer Commanding Troops in Garrison will make emergent requisition on the Officer in charge of the Camp Equipage Depot for such tents as may be required to shelter shipwrecked people.

IX. Officers on wreck duty will be in uniform, and Mounted Officers will have their horses with them.

SECTION V.

ORDNANCE DEPARTMENT.

I. The Commissary of Ordnance, Fort St. George, will be responsible that three sets of life-saving apparatus, with rockets, &c., complete, are at all times kept packed in carts ready for use in the arcade of the Arsenal, and that the Warrant and Non-Commissioned Officers of the Department are told off into rocket parties, and are instructed and periodically drilled to the practical use of the whole apparatus.

II. Inconvenience, danger, loss of life, and much damage of property were sustained in the Cyclone of May 1872 by there being no available means for dragging from the sea the logs, pieces of wreck, bales of goods, &c., which were dashing to and fro on the edge of the surf. There will, therefore, be held at all times in readiness by the Commissary of Ordnance a supply of boat and firehooks, grappling irons, and ropes of short lengths for issue as required to the Military working parties. Lanterns will also be kept ready for wreck night duties.

III. On the Commissary's receiving intelligence from the Deputy Assistant Adjutant-General that the "suspicious weather" signal has been hoisted, he will make arrangements to have one rocket party of Europeans with a detachment of Store Lascars in the Arsenal night and day till the danger passes off, or their services are required.

IV. On the "wreck signal" being fired, or on receiving intimation from the Deputy Assistant Adjutant-General of imminent danger to the shipping, the Warrant and Non-Commissioned Officers already told off in accordance with paragraph I will proceed in one, two, or three parties (as may be required), as speedily as possible, to the point or points where their services are most urgently required. These points, and the ships to which aid is to be first given, will be decided on by the Commissary in consultation with the Marine authorities on the spot, by whom he will be guided in the matter. If the rockets are used in the rescue of any ship's crew, the whole apparatus attached to the rocket cart will, under ordinary circumstances, be employed and be worked by the men of the Ordnance Department.

V. Two trollies, drawn by mules, have been ordered on occasions of wreck to be placed at the disposal of the Commissary of Ordnance by the Commissariat Department. They are intended to be used for the conveyance of rocket apparatus, hawsers, &c., should any wreck or wrecks take place at a distance from the Fort, such as St. Thomé or the Adyar; but, should they not be required for this purpose, they may be employed under his orders for any other necessary use connected with wreck work.

VI. The Commissary of Ordnance will, in communication with the Officer Commanding the District, arrange for the instruction of Detachments of the Battery of Royal Artillery in the use of the rocket and life-saving apparatus.

VII. He will apply to the Deputy Assistant Adjutant-General or Officer Commanding Royal Artillery, Fort, for any aid in men which he may emergently require in case of a cyclone.

VIII. When hawsers are necessarily left attached to wrecks, the Commissary of Ordnance or Senior Ordnance Officer will inform the Police of the fact.

IX. All Officers, Warrant and Non-Commissioned Officers and Store Lascars will be in uniform on wreck occasions.

X. The officer in charge of Camp Equipage Department will, in cases of wreck, promptly comply with emergent requisitions in writing from the Officer Commanding Troops in Garrison for tents for the shelter of the shipwrecked people.

SECTION VI.

MEDICAL DEPARTMENT.

I. On the "wreck signal" becoming necessary, the Deputy Assistant Adjutant-General will send intimation of the fact to the Deputy Surgeon-General, Eastern District, the Fort Surgeon and the Resident Assistant Surgeon at the General Hospital. The latter will warn the Surgeon and the Physician of the General Hospital, and similar warning will be given to the Superintendent of the Eye Infirmary at Vepery and to the Surgeon of the 1st District at Rayapuram by the Officers Commanding the Regiments at these places.

II. On hearing the guns of the "wreck signal," or on receipt of intimation from the Deputy Assistant Adjutant-General, these Medical Officers (except the Physician), taking with them a portion of their Establishments and the medicines and surgical appliances, which have been detailed by their Departmental Head, will forthwith proceed to the beach, and, in consultation with the Senior Marine and Military Officers on the spot, will distribute themselves to the various scenes of wreck or apprehended wreck, as occasion may require.

III. The Physician of the General Hospital will remain at the institution to receive and afford medical aid to all such as may be sent there from the beach for treatment.

IV. The Transport Officer will despatch to the beach as many sets of bearers as are available, with Doolies, Munchies or Dandies, to be placed at the disposal of the directing Military, Medical or Marine Officers present.

SECTION VII.

COMMISSARIAT DEPARTMENT.

I. On intimation being received from the Deputy Assistant Adjutant-General of imminent danger to shipping, or on the "wreck signal" being heard, two trollies drawn by mules will immediately proceed under a Staff Serjeant to the Arsenal and there await the orders of the Commissary of Ordnance.

II. Two other trollies, drawn by mules, each under care of a Warrant or Non-Commissioned Officer, and each containing an assortment (which will always be held in readiness in waterproof covers or cases) of blankets, towels, flannel banians, flannel drawers, biscuits, brandy, water, and drinking vessels, will be taken in the first place to the Marine Office, and thence, as directed by the Marine Officer, to the scenes of shipwreck, where the contents will, if required, be issued and used for the relief of shipwrecked persons under the orders of the directing Medical, Military, or Marine Officers present. As many sets of bearers as are available with hammocks slung on poles will at the same time be sent to the beach and will be placed at the disposal of the said Officers.

III. The Executive Commissariat Officer will also despatch a supply of draught bullocks with drivers to the Camp Equipage Depot for sick carts, which, under the orders of the Warrant or Non-Commissioned Officer in charge, will be taken to the beach as soon as the violence of the weather permits, and will also be placed at the disposal of the said officers.

A.

CIRCULAR.

The periodical season of uncertain weather on this coast having now arrived, the undersigned would hereby earnestly caution all Commanders of Vessels in these roads to keep their ships as much as possible prepared in every respect for standing to sea, at short notice, should the necessity arise for doing so.

1. Top-gallant masts, &c., with their rigging also, must be got on deck, flying jib-boom sent in, topsails and courses kept ready reefed, and everything on deck and below so arranged as to admit of being quickly secured on emergency. A good slip rope and buoy should be attached to the riding cable, and, as an additional precautionary measure, a stout warp also, to be used as a spring in caulking the vessel, if found necessary, on being required to put to sea.

2. A prudent distance from the shore in respect to anchorage must now be observed, as a vessel lying nearer in at the time of bad weather here is, from exposure to the heavy ground swell, necessarily far less able to ride safely and securely than one well out.

3. Too much care cannot be paid in maintaining a perfectly clear berth, and Commanders should be mindful to keep their ships at as great a distance from each other as can conveniently be managed in order to avoid risks of collision by driving, or when slipping to stand to sea.

4. Every attention in the way of observation and look-out will be paid by this Department, and the usual warning and other signals promptly made, as need may call for. In order to prevent misapprehensions on the subject of signals, especial attention is requested to the circumstance that (during the prevalence of foul weather, however, only) when a *private* signal is intended to be made to a single vessel, besides hoisting her number in the first instance, No. 1 will be kept flying at the opposite yardarm. All other signals in which this said distinction is not made use of are to be considered as general, and obeyed accordingly.

5. It is very desirable that, during the prevalence of suspicious or threatening weather, Commanders to remain by their vessels. Commanders should stay at nights on board their respective vessels, and also remain by them as much as possible until the uncertain period has been fairly passed over.

6. In event of wreck occurring, the usual appliances as put forth by the Board of Trade are adopted here, but should it be observed the rocket apparatus is not at once forthcoming, a line which the tail block and double line will be attached by those on shore, or other handy means, to other steps must be carried out.

7. In conclusion, Commanders are earnestly reminded that, as intimated in the Port Instructions, Commanders are *not* on any account to await display of "Commanding Officers are not to wait the display of signals if they deem it prudent to put to sea," it being in no way whatever obligatory for them so to await directions from the shore for standing to sea.

Port Officer's Office, Executive Department,
Madras,
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Assistant Port Officer.