

12 3 4 Survival Factors Factual 5 6 7 8 9 10 **Accident Identification** 11 12 Accident No. DCA-03-MM-035 13 Vessel: Taki-Tooo 14 Accident Type: Capsizing Location: Tillamook Inlet, Oregon 15 June 14, 2003 16 Date 17 18 **Party Members** 19 20 21 Group Chairman Cynthia L. Keegan 22 National Transportation Safety Board 23 Washington, D.C. 24 25 Group Member Mariette M. Burer Accident Investigator National Transportation Safety Board 26 27 Washington, D.C. 28 29 Group Member Paul Vitus 30 Lane County Sheriff's Office 31 Eugene, Oregon 32 33 Group Member PS1 Kenneth J. Reis 34 **United States Coast Guard** 35 Portland, Oregon 36 37 Group Member Lt. Belen Audirsch 38 **United States Coast Guard** 39 Portland, Oregon 40 41

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# **Accident Summary**

At about 0605 on the morning of June 14, 2003<sup>1</sup>, the U.S. Charter Fishing Vessel *Taki-Tooo* departed the marina at Garibaldi, Oregon with seventeen passengers and two crewmembers on board. The vessel proceeded to an area near the entrance to Tillamook Bay and waited for the opportune sea conditions before making an attempt to depart the inlet. At about 0715 the *Taki-Tooo* departed the inlet and encountered a wave that capsized the vessel. The master and eight passengers died. Two persons were missing and presumed dead. The deckhand and remaining seven passengers washed ashore on the nearby Barview beach and survived.

#### **Accident Narrative**

The charter vessel *Taki-Tooo* was owned by the Davis Fisheries, Inc and operated by Garibaldi Charters on June 14 by a crew of two, the captain and his deckhand. The captain arrived at Garibaldi Charters office\_approximately at 0530, and passengers started to board shortly thereafter. In all, the *Taki Tooo* boarded 17 passengers and the two-crew members.

Once all the passengers had boarded, the captain gave a safety orientation in accordance to the Coast Guard requirements<sup>2</sup> and a general orientation of the boat

<sup>&</sup>lt;sup>1</sup> All times are based on Pacific Daylight Time (PDT), which is seven hours earlier than Universal Time. <sup>2</sup> According to Title 46 *Code of Federal Regulations* (CFR) Part 185.506 stipulates, "...the master of a vessel shall ensure that suitable public announcements are made informing all passengers of the following:(1) The location of emergency exits, survival craft embarkation areas, and ring life buoys; (2) The stowage location(s) of life jackets; (3) Either."

regarding the location of the toilet, passenger seating, fishing gear and coolers. The captain stressed how important it was for everyone to listen and make sure they paid attention to the location of the life jackets, life raft and throw ring along with emergency flare kit and the first aid kit in the cabin. The storage of the life jackets was inside the cabin in the clearly labeled bins (benches) along the sides of the dinette table. The captain offered the life jackets to anybody who wanted them, which would be up to the individual. Either the deckhand or the captain would be able to obtain the life jackets for the passengers and help don the lifejackets. Further, the captain shared his personal rules of no hard alcohol, drugs, throwing trash overboard and getting sick inside the cabin. Originally, they were supposed to take some crab pots with them but decided against it due to the swells and rough bar.

The *Taki-Tooo* departed the marina at about 0600 and proceeded towards the entrance to the inlet. *The Oakland Pilot* and the *Norwester* approaches Tillamook Bay Bar at approximately 0545. The *D&D* and *Taki Tooo* approach the bar at 0550. With the charter boats, there was a USCG MLB 47210 manning the area from the Tillamook Bay CG Station. All the charter boats maneuvered in the area of the jetty tips while watching the bar for a lull or an opening in the waves that would have allowed them to cross the bar and transit out to sea.

Tillamook CG Station has a tower watch manned by one seaman (SN) that oversees any crossings that may occur within the jetty. Their first light shift runs from 0400 till 0700 which at that time they are relieved by another seaman.

The first charter vessel, *Norwester*, crossed the bar at 0650 and the USCG Tower watch seaman notified their MLB that the *Norwester* had made it across safely. The *Norwester* called back to the other vessels to inform them it was pretty rough out there and to wait. The second charter vessel to cross was the *Oakland Pilot* at 0655 and again Tower watch notified their MLB. The captain radioed back and informed them they had dodged a log, and one of his windows was broken, and one passenger received a minor injury. Further he stated there were a lot of logs in the area.

At 0700 shift change occurred at the Tower watch while the *D&D* and *Taki Tooo* were still inside the jetty. During the exchange of shift information, the seaman that was being relieved verbalized to the on-coming seaman that "the bar is pretty rough, here is the bar report and you just missed some cowboy stuff pulled off by the *Norwester* and the *Oakland Pilot*." Additional, standard information to exchange is to read the logbook, sign out, and log times of work in the tower. After the standard information was exchanged the second seaman was officially on duty. The tower watch also keeps a rough log under direction of the Officer in Charge (OIC) Station Tillamook, noting the vessels transiting the bar, their name, and number of personnel aboard.

At 0713 the *D&D* crossed the bar safely while the second seaman watched through his "big eye" (binoculars). According to the deckhand of the *Taki Tooo*, they had been making about 5-6 circles in about 5 minutes after the *D&D* crossed, she had asked everyone to sit down. While circling, the deckhand was able to see the south buoy marker when the waves were not blocking the view. Most of the people were outside on

the deck, and a few people were downstairs in the cabin. The deckhand and the captain were up on the flying bridge. There was a bench and a chair seat on top of it on the flying bridge. The captain was seated in the seat while the deckhand sat next to him on the bench. She stated that they were "inching out there and that crossing the bar is all about timing." They were pretty close to the North Jetty and past the tip of the jetty, heading towards the middle of the bar so they could see around the jetty. The deckhand believes the captain put the boat in reverse temporarily and said he "didn't want to get into this." However, not at any time did the captain suggest to discontinue the trip and return to the marina. When they went over the first wave, it somewhat tilted the *Taki* Tooo, and the deckhand informed everyone to hold on but didn't look back at the passengers to see where everyone was located at that time. The deckhand grabbed onto the boat and was yelling at everyone that it probably was a nine or ten foot wave. However, she did see another wave forming that was really steep and coming straight for them. She believes that the captain somehow turned the boat and got completely sideways to the wave. The wave which was approximately a 12-15 foot wave, hit the *Taki-Tooo* sideways on the port side and completely rolled over the boat.

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At the time of the roll over, none of the passengers had life jackets on. According to the deckhand the captain knew the weather was going to be bad and that they would have to wait for the tide to switch. The captain followed normal procedures for the pretrip inspection and the deckhand's father had checked the fuel and oil earlier that morning. The responding search and rescue parties involved the USCG MLB 47254 and MLB47210, USCG Helicopters, the land-based fire departments and emergency medical

- 1 services from the counties of Tillamook, Garibaldi, Manzanita, Bay City and Rockaway
- 2 Beach.

4 The actual season is from March or April till the end of October.

The EPIRB on the *Taki Tooo* was activated at 0725 and the Coast Guard immediately notified Garibaldi Charters. The 15-digit number was verified and a Coast

8 Guard helicopter was launched without delay.

# **Injuries**

The injuries sustained in the *Taki-Tooo* accident, shown in table 1, are categorized according to the injury criteria of the International Civil Aviation Organization (ICAO). The Safety Board uses the ICAO injury criteria in all its accident reports, regardless of transportation mode.

**Table 1:** Injuries sustained in the *Taki-Tooo* accident.

Injuries	Crew	Passengers	Other-Missing	Totals
Fatal	1	8	2	11
Serious	0	0	0	0
Minor	1	7	0	8
None	0	0	0	0
Total	2	15	2	19

 49 Code of Federal Regulations (CFR) 830.2 defines a fatal injury as: "any injury that results in death within 30 days of the accident. It defines serious injury as that which requires hospitalization for more than 48 hours, commencing within 7 days from the date the injury was received; results in a fracture of any bone (except simple fractures of fingers, toes, or nose); causes severe hemorrhages, nerve, muscle, or tendon damage; involves any internal organ; or involves second or third degree burns, or any burn affecting more than 5 percent of the body surface."

1 Injury information for the surviving passengers and deck hand was obtained from 2 the Tillamook County General Hospital. Two passengers are missing and presumed 3 dead. 4 5 Damage 6 7 See operations factual 8 9 **Personnel Information (Crew Information)** 10 11 The *Taki-Tooo* crew consisted of one captain, one deckhand and 17 passengers. 12 There were nine fatalities including the captain, eight survivors including the deckhand 13 and two missing. The USCG helicopter and the MLB recovered a total of three fatalities. 14 15 <u>Captain</u>: The captain was a 66 year-old male at the time of the accident, with over 16 16 years experience operating the *Taki-Tooo* in and out of Tillamook Bay. He was well 17 regarded by other charter vessel operators as a capable vessel operator, who had crossed 18 the Tillamook bar over a thousand times without incident. The captain's wife stated that 19 the captain was in good health and was looking forward to operating the *Taki-Tooo* that 20 day. The deckhand reported that he seemed his usual self, talking and joking with the 21 passengers. 22 23 <u>Deckhand</u>: She was a 22-year-old female at the time of the accident; it was her fifth year 24 as a deckhand and the first trip of the season with this captain who she has worked with

1	during her first year. She worked with her brother for three years and some with her
2	father. It was a summer job for her during school breaks and was a recent graduate which
3	probably would have made the summer of 2004 her last year as a deckhand. She was
4	currently studying for her captain's license, and has taken CPR, First-Aid and the
5	maritime drug testing courses, but didn't officially take a formal course for maritime
6	deckhands.
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8	Duties as she had been taught as a deckhand, was to welcome the passengers,
9	untying the boat and getting it ready to go out by taking the fenders off, setting up the
10	fishing poles, teaching the people how to fish, and bringing their fish onboard, and
11	making everyone as comfortable as possible and try to answer any questions that may
12	have presented itself during the course of the trip.
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14	Vessel Information
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16	Inside the cabin, on both sides of the table were two benches and inside those
17	benches the life jackets for child and adults were stored which were clearly labeled.
18	Further, there was a placard down in the cabin for instructions of how to don a life jacket.
19	The flying bridge holds a bench with a chair seat on top of it.
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23	Safety equipments on board the Taki-Tooo

- 1 A total of 22 Adult size USCG approved Type 1 PFD along with three child size
- 2 USCG approved Type 1 PFD were onboard the *Taki-Tooo* the day of the incident.
- Additionally there was a USCG approved Jim-Buoy Life Float with a capacity of 22
- 4 persons. The *Taki-Tooo* had the required fire extinguishers on board; three B-I and one
- 5 B-II along with a first aid kit.

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- 7 Electronics on the vessel included a combination plotter, fish finder, radar, and wheel
- 8 with troll valve on the port side and gearshift and throttle on the starboard side.
- 9 Additionally, they had two radios (VHF) and CB. Furthermore, there was an Emergency
- 10 Position Indicating Radio Beacon (EPIRB) on board the *Taki-Tooo*.

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# **Medical and Pathological Information**

- On June 14, 2003, when the *Taki-Tooo* rolled, the captain and eight passengers
- where thrown into the water approximately 75 yards northwest of the north Barview jetty
- tip. According to the Tillamook County Coroner, the cause of death in each instance was
- drowning by asphyxiation/hypothermia. The seven recovered fatalities in the accident,
- one female and six males ranged in ages 46 to 70. Two are still missing presumably
- 19 dead.
- Seven of the eight survivors on board the Taki-Tooo were transported by
- ambulance to Tillamook County General Hospital. The deck hand was brought to the
- 22 hospital by private automobile. The survivors were treated for hypothermia and released

from the local hospital. One passenger stayed overnight and the remaining seven were released the same day.

A toxicological analysis sample of blood and urine of the captain's body was

performed by the Oregon Health & Science University (OSHU) Medical Examiner in

6 Portland, Oregon. The results found in the blood sample for the alcohol panel of Ethanol,

Methanol, Acetone, Isopropanol was negative. The results found in the urine sample for

8 the Immunoassay drug screen of Amphetamines, Cocaine Metabolite, Opiates,

9 Barbituates, Benzodiazepines, Cannabinoids were negative.

# **Survival Aspects**

# Emergency Response from the USCG

At 0715 on June 14, 2003 the F/V *Taki-Tooo* began to cross the bar, approximately 100-150 yards NW of North Jetty. After encountering a 9-10 foot wave, the vessel turned sideways and became parallel to the wave. The following wave, estimated as 12-15 foot high, hit the vessel port side causing it to capsize. The United States Coast Guard (USCG) Seaman that was on duty in the Tillamook Bay Tower immediately notified the USCG Motor Life Boat (MLB) 47210, already positioned in the north jetty, and then notified the USCG Station Tillamook Bay, which sounded the Search and Rescue (SAR) alarm. The MLB 47210 was not able to attempt the rescue because of the *Taki-Tooo* being too close to the jetty and in the shallow waters of the breaking surf. Additionally the conditions at the bar exceeded the qualifications of the

1 coxswain of MLB 47210. The Master Chief Boatswains Mate (BMCM), the Officer-in-

2 Charge (OIC) of Station Tillamook Bay, was notified of the accident along with the

3 Group Duty Officer (GDO) of Astoria. The GDO requested USCG helicopters to be

launched from Astoria Air Station, located approximately 30 miles from the Tillamook

Inlet, which would give them a response time of about 26 minutes. At approximately

07:20, while preparing to get underway to relieve MLB 47210 from bar patrol, MLB

7 47254 received notification of the capsized F/V *Taki-Tooo*. MLB 47254 arrived on the

scene of the north jetty at 07:32. The Tillamook Bay Tower watch seaman notified the

9 Tillamook County Emergency Communications District (E911), which in turn paged the

local volunteer Fire & Rescue (F&R) Departments of Garibaldi, Bay City, and Rockaway

Beach, along with the responding Emergency Medical Service (EMS) Units of the cities

of Garibaldi and Manzanita and Tillamook County, Oregon.

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#### **Search and Rescue**

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At 07:40 MLB 47254 spotted one person floating face down inside the surf zone wearing a green jacket, blue jeans, and a white t-shirt but not a life jacket. The Coxswain (Coxn)/Surfman of the MLB radioed the station they had located a victim and were maneuvering to pick him up. No additional victims were seen in the area. Five minutes later, they recovered the victim and brought him to the aft deck of the MLB to assess his condition. The Coxn/Surfman contacted the USCG station and his OIC to notify them of the victim's condition. The victim was unconscious, pulse-less, and with no respirations. The crew began Cardiopulmonary Resuscitation (CPR) on the victim in the Survivor's

1 Compartment of the MLB. While continuing with CPR, the MLB returned to the station

2 at the direction of the OIC to turn the victim over to the awaiting EMS. MLB 47254

3 returned to the station at 07:55 and moved the victim onto the dock inside the boathouse.

The victim was transferred to Garibaldi EMS personnel and declared DOA.

Of the 17 passengers and 2 crewmembers, 7 passengers and 1 crewmember survived, 9 fatalities and 2 are missing and presumably dead. Six passengers were inside the cabin when the vessel capsized. One passenger was on the aft deck but when the vessel rolled was pushed inside the cabin. He is not sure how he ended up inside the cabin after the capsizing. One man made way to the benches where the lifejackets were stowed and started handing them out to the passengers inside the cabin. One person was able to put on a life jacket after the boat rolled over but was not able to exit the cabin. Five of the eight survivors were able to use in some form or actually put on life jackets while in the water. Two of the three remaining were washed ashore by the waves and the remainder one passenger had a lifejacket on inside the cabin, but had to take it off to get through the window and then lost hold of the lifejacket, was able to swim to shore on his own accord. Seven of the eight survivors were transported by ambulance to Tillamook County General Hospital for evaluation and then released. The deckhand was transported to the hospital with private vehicle and also released the same day. Only one survivor stayed overnight for observations.

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# **Table 1.** Relation of location on boat and use of lifejacket to survivability of *Taki-Tooo* occupants.

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Age/	Loca	ation	Use of						
Gender	Precapsize Postcapsize		Lifejacket	Remarks					
Fatality Victims									
66/M	Flying bridge	Water	No	Master of vessel. Body recovered by Coast Guard lifeboat; taken to Station Tillamook Bay.					
66/M	Cabin	Cabin	Yes	Donned lifejacket. Unable to exit cabin. Body recovered from cabin when vessel washed up on beach.					
70/M	Open deck	Water	No	Body recovered.					
49/F	Open deck	Water	No	Body recovered.					
53/M	Open deck	Water	No	Body recovered.					
65/M	Open deck	Water	No	Body recovered.					
54/M	Open deck	Water	No	Body recovered.					
61/M	Open deck	Water	No	Body recovered.					
46/M	Open deck	Water	No	Body recovered.					
52/M	Open deck	Water	No	Body not recovered.					
43/M	Open deck	Water	No	Body not recovered.					
Survivors									
22/F	Flying bridge	Water	No	Deckhand on vessel. Removed boots and outer clothing gear; made it to shore.					
18/M	Open deck	Cabin	Yes	Held onto lifejacket as exited through window. Made way to shore. Aided out of surf by bystanders.					
28/M	Open deck	Water	No	Reached life float 5-6 times but unable to hold on. Washed to shore by wave action.					
52/M	Cabin	Cabin	Yes	While <i>Taki-Tooo</i> was upside down pulled out lifejackets and passed them out. Removed lifejacket to exit through window; put lifejacket on over his head. Floated to shore. Aided out of water by bystanders					
23/M	Cabin	Cabin	Yes	Tied lifejacket around arm. Exited through window. Floated to shore. Aided out of surf by bystanders.					
34/M	Cabin	Cabin	Yes	Assisted in handing out lifejackets. Removed lifejacket to exit through window. Lost hold of lifejacket during exit. A strong swimmer, he swam to shore.					
48/M	Cabin	Cabin	Yes	Put lifejacket around neck, exited through window. Floated to shore hanging onto lifejacket.					
47/M	Cabin	Cabin	Yes	Exited through cabin door; made it to shore.					

1 According to the interviews conducted, the water temperature was taken from the 2 depth finders on each 47-foot MLB. The reading of the MLB 47210 was 52 degrees F 3 and from the MLB 47254 it was 59 degrees F. In the Coast Guard logs it has been 4 recorded a temperature of 52F at 10:15 AM approximately, three hours after the accident. 5 Due to the water temperatures recorded it would be worth noting the latest stages of Cold 6 Water Immersion. The latest research in cold water immersion has been requested by 7 Transport Canada and this is a general overview of the results. Cold Water is defined as 8 25C or less and waters below 15C can have crippling effects. Within a few short minutes 9 after immersion into cold water, a life can be lost. 10 Stage 1. Initial Immersion Responses or Cold Shock (3-5 minutes). 11 Entering the water with a life jacket can increase survivability immensely. 12 Due to the head stays above water during the cold shock phase and it can help with 13 swimming in cold water. Cold Shock can occur the minute one enters the water. Their 14 will be an increase in Heart Rate and Blood Pressure, panic will set in and the victim will 15 be unable to get air into their lungs and hold their breath. These cardiac responses may 16 cause death, particularly in older less healthy people. Death of cold shock is not 17 uncommon. One should understand that the three critical areas that will lose heat is the 18 head and neck area, the chest area and groin area. Therefore if by yourself it is critical to 19 get into the HELP position to protect the critical areas and slow down the loss of heat. 20 Stage 2. Short-term immersion or Swimming Failure (3-30 minutes). 21 Swimming in warm water is no indication how a person will swim in cold water. 22 This is the issue of rapid cooling of nerves and muscles. In the Short-term immersion

stage, one will continue to experience the loss of body heat, a shut down of extremities

- 1 occurs, muscle coordination is lost and often a victim becomes incapacitated which
- 2 result in swimming failure.
- 3 Stage 3. Long-term immersion or Hypothermia (>30 minutes).
- 4 A significant core body temperature loss will occur during this stage. A victim
- 5 will go into semi-conscious state becomes disoriented and often is unable to respond to
- 6 rescue efforts. Death by drowning or heart failure often is the result.
- 7 Stage 4. Post-Rescue Collapse
- 8 This can occur after hours in the cold water. Excessive drop in Blood Pressure
- 9 will occur and as a result heart failure. The blood pool down in the lower body and the
- 10 heart is not working efficiently. The victim may very well die at this stage.

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#### **United States Coast Guard Response**

- The largest helicopter in the Coast Guard inventory is the HH-60J "Jayhawk,"
- which was the aircraft involved in the Taki-Tooo response. The USCG Station
- 16 Tillamook Bay log indicated that, USCG Helicopter Rescue arrived on site of the north
- 17 jetty at 07:45. The aircraft commander asserted that the *Taki-Tooo* was already washed
- ashore and that the "surf was up pretty heavy that day." Empty life jackets, the life raft, a
- mustang coat (which can provide flotation and hypothermia protection), clothing, logs,
- and other debris were seen in the waters. A second helicopter was dispatched, performed
- searches but did not make any recoveries. At 08:02, a rescue swimmer made the first
- recovery from the surf from the first helicopter. This was a direct deployment by the
- swimmer i.e. he was lowered on a cable and while performing the recovery, remained

1 attached to the cable. The victim was not wearing a shirt or life jacket. The helicopter 2 transferred the victim ashore to awaiting EMS personnel. The helicopter returned to the 3 scene and continued the search. At 09:08 the helicopter had spotted another victim. The 4 helicopter recovered the victim at 09:15, approximately 200 yards from the tower outside 5 of the north jetty. The victim was unresponsive and also not wearing a life jacket. At 6 09:23 the helicopter moved ashore and landed on the beach for awaiting EMS. The 7 Garibaldi F&R Department and the helicopter crew confirmed that 8 bodies had washed 8 ashore, two of which had been recovered from the surf. MLB returned the body of one 9 victim to the Tillamook Bay Station. At Tillamook County General Hospital seven 10 survivors were taken by ambulance to Tillamook County General Hospital while the 11 eighth person was taken to the Tillamook County General Hospital by private 12 automobile. Seven of the eight victims were treated and released the same day, while one 13 person stayed overnight for observation due to intractable vomitus secondary to ingestion 14 of seawater and perhaps exacerbated by the stress of his father having died in the 15 capsizing of the *Taki-Tooo*. He was released the following day. 16 The first helicopter, which made the two rescues, returned back to the Air Station Astoria 17 at 10:47 and the second helicopter continued with the search until 16:24. 18 At first light the next morning, June 15, the two 47-foot MLBs from Station Tillamook 19 Bay and an HH-60J helicopter from Air Station Astoria resumed the search for the 20 missing victims. Results were negative, and the Coast Guard suspended the search at 21 0857. 22

#### Emergency Response Agencies...Fire & Rescue Departments and EMS

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3 The initial call to the Garibaldi Fire & Rescue (F&R) fire chief was relayed from 4 the E911 operator. The call came from the coast guard station Tillamook Bay at 07:21. 5 The coast guard original requested several ambulances to the coast guard station and to 6 the north side of the north jetty on the beach. The responding EMS units involved were 7 from the Tillamook Ambulance Services that includes Garibaldi and Manzanita which 8 are local towns located within Tillamook County. At 07:26 the Garibaldi F&R fire chief 9 was paged and en route at 07:30. The volunteer fire department uses a pager system that 10 is activated through Tillamook E911 center. The fire chief and one rescue rig from the 11 Garibaldi F&R Dept. arrived at the North jetty on the beach at 07:36:57 and the fire chief 12 took command. The following table will show the first arriving units from the additional 13 participating counties such as Tillamook Sheriffs Office, Manzanita and Rockaway 14 Beach Fire Department.

15	Participant		Time arrived on Scene	Location	
16	Garibaldi F&R Engine	07:36:57	Coast Gua	ard Station	
17	Garibaldi Ambulance	07:38:24	Barview J	letty North Side	
18	Tillamook County Sheriffs	07:44:55	Same as a	bove	
19	Manzanita Ambulance	07:46:03			
20	Rockaway Beach	07:48:00			
21	Garibaldi F&R Engine	07:52:02			
22	Garibaldi Ambulance	07:55:30			
23	Tillamook County Sheriffs	07:58:54			
24	Tillamook County Amb.	08:00:48			
25	Tillamook County Sheriffs	08:07:51			
26	Tillamook County Amb.	08:14:13			
27					