You're Grounded!

The grounding of a passenger vessel prompts large-scale response effort.

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A river cruise ship goes hard aground on a rocky ledge outside the main navigation channel of the Columbia River, near Portland, Ore. The vessel floods and begins to list to port. Onboard are 260 passengers and crew, and more than 35,000 gallons of diesel fuel. It is a mild morning in early spring, but the weather is notoriously unpredictable in the lower Columbia this time of year, and sunset is in seven hours. Many of the passengers are elderly and cannot debark to shore. The chill of the air, combined with the cold water temperature make the onset of hypothermia a rapid certainty for any person who falls overboard. This is not a drill.

Despite making the Columbia River voyage more than 100 times since being built in 2001, the 360-foot *Empress of the North* took an unexpected and nearly disastrous turn recently, and Sector Portland was ready to answer the call. The grounding occurred near Washougal, Wash., just 20 miles east of Portland, Ore. The vessel would remain there for 54 hours, and motivate a multi-agency response that captured the attention of thousands (Figure 1).

ICS in Action

Coast Guard units from Station Portland and Air Station Astoria were immediately dispatched to the scene by the commander, Sector Portland CAPT Patrick Gerrity. In keeping with the Incident Command System (ICS) process, a fully functional unified command was established within two hours of the initial notification at Sector Portland, made up of members from the U.S. Coast Guard; Washington Department of Ecology; Portland Fire Bureau; and the owners of the Empress of the North, American West Steamboat Co. At the height of this response, more than 30 people were working together at an incident command post, pooling expertise from

Figure 1: The *Empress of the North* (left) transfers passengers and non-essential crew to its sister ship, the *Queen of the West* (right) as an HH-60J from Air Station Astoria flies overhead, monitoring the incident. Response boats from Station Portland and the Multnomah County Sheriff's office are also on scene to assist with the transfer. USCG photo by PA1 Amy Gaskill, USCG (ret).

Figure 2: CWO4 Eric Olson approaches the *Empress* to assess the vessel's condition, as plans were being developed to transfer passengers. LT Zeke Lyons (seen on the bridge wing), a marine casualty investigator, obtains information from the bridge. USCG photo by PA1 Amy Gaskill, USCG (ret).

various fields, including incident management, mass search and rescue, naval architecture and salvage, and marine casualty investigations. The incident quickly became a high-visibility media event, tapping all local and regional outlets and several national and international press markets.

With sunset fast approaching, and status reports indicating progressive flooding, the unified command quickly set objectives and developed an incident action plan, focusing on the mass rescue operation for the 180 passengers and 80 crew first. The greatest challenge was finding the right search and rescue platform to safely transfer hundreds of people off the vessel. This necessity and the talents of the unified command team brought forth its first of many innovative solutions to this three-day response.

Right across from Sector Portland's Base and only a thirty-minute transit away from the grounded vessel, the *Queen of the West*, sister ship to the *Empress of the North*, had just completed a scheduled dry dock maintenance period. The owner, American West Steamboat Co., agreed to offer the services of the *Queen of the West* as a rescue vessel. The unified command directed the ship and a mooring barge into position alongside the *Empress of the North* (Figure 2).

With sector responders and Portland Fire on scene, 240 persons were safely transferred from the barge to the 230-foot *Queen of the West* (Figure 3), accounted for, and delivered to a designated triage area, where a medical team was standing by. Remarkably, no injuries to passengers, crew, or rescue personnel occurred during the rescue. Twenty crew members remained on board to man critical positions, taking continuous soundings of tanks to monitor flooding and ship stability, and keeping vital power and navigation systems on line.

The Incident Action Plan Shifts Gears

With the search and rescue phase of the response complete, the unified command set new incident objectives, focused on the pollution threat. Although no sheen on the water was reported after the grounding, the wind and current were "working" the vessel harder onto the river bottom, stressing the hull and possibly contributing to the uncontrolled flooding. Confirmation of fresh water in several voids, located under the ship's fuel tanks, added to the urgency to remove the fuel quickly and prevent an oil spill. Doing so would not only reduce the potential for environmental damage, but also lighten the ship, so that it could be pulled off the river bottom.

The operations section chief requested assets from Marine Safety and Security Team 9110 from Seattle, for safety zone enforcement and deployment of their remotely operated vehicle (ROV). From the decks of the *Empress of the North*, the ROV was used to check the hull below the waterline, providing a unique opportunity to view damage that was allowing water to fill three voids. The visual inspection also confirmed that the fuel tanks remained intact and free from damage.

Meanwhile, as the ICS planning and operation section refined the IAP and tactics, the logistics section coordinated in securing equipment to lighter the ship of its fuel. Sector personnel recommended a coordinated release of water from the Bonneville Dam, located upriver of the vessel to assist the salvage tugs now enroute to the scene. A quick phone call to the Army Corps of Engineers secured its assistance, and brought the talent and capabilities of yet another agency into the first ever dam-assisted response on the Columbia River.

Final Salvage, Repairs

Sector Portland pollution responders oversaw the successful offloading of 30,000 gallons of marine diesel fuel from the vessel by the end of the second day, and the stage was set for the final salvage phase of the response, when two tugs pulled the vessel from the ledge. This was made possible by removing

passengers and fuel, and the extra water released from the Bonneville Dam that raised water levels on scene approximately one foot.

Under its own power, the *Empress of the North* went into dry dock in Portland, Ore. to assess damage. Just three weeks later, the hull was fully repaired, passed Coast Guard inspections, and the *Empress of the North* was returned to service.

Preliminary Investigation

Coast Guard investigators at Sector Portland determined that several factors contributed to this casualty, the most significant of which was simply a poor meeting location on the river. "The *Empress of the North* had to maneuver out of the channel in order to avoid a tug and barge traveling up bound, which had been set off course by wind and currents," says LT Zeke Lyons, a marine casualty investigator at Sector Portland. "The operator of the *Empress* tried to slow the vessel to let the tug and barge pass, but was unable to slow it enough to keep the vessel from ending up on Ough Reef." The *Empress of the North* has since made changes to its standing orders and operations to reflect that there are certain parts of the Columbia River where it shall not meet other vessels.

Vessels transiting up and down the Columbia River routinely call out their locations on the radio so they can anticipate meeting situations and react accordingly. Sector investigators found out, however, that there is no actual standard or list of call out locations on the river. Personnel from Sector Portland and the Columbia River marine industry are currently working together to fix this problem to prevent future incidents.

An Interagency Success Story

The value of extensive prior interagency coordination and application of NIMS/ICS were highlighted during the response. The agencies that responded to the *Empress* had, ironically, just that week completed "Columbia Challenge," a three-day full-scale terrorism and environmental-response drill (see related article). This drill was used to evaluate local area contingency plans; federal, state, and local industry response plans; and communications compatibility.

This provided an opportunity for all stakeholders to meet and understand the capabilities and resources that each would contribute during an actual incident. "The successful actions during this case can be directly attributed to exercises like Columbia Challenge, which we conducted just prior to the *Empress* grounding," says CAPT Gerrity. "I am very proud of the relationships we have established with our partners on one of the busiest river systems in the country."

About the authors:

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Figure 3: MST1 Lucia Mack assists passengers with special needs during the passenger transfer. A barge was placed between the *Empress of the North* and the *Queen of the West* to safely facilitate this process. USCG photo by PA1 Amy Gaskill, USCG (ret).