



Rugged Coast

RESEARCH SOCIETY

Marine debris survey and reporting package

The following resources have been created and shared to maximize shipping container spill data collection efforts province-wide.



Cargo ship container spills are becoming increasingly frequent and severe worldwide due to the increased sizes of ships, congestion at ports of call, and demand for inexpensive goods manufactured overseas. Debris from these spills is hazardous to mariners as they navigate ocean water and are a direct hazard to aquatic ecosystems as materials break down into easily digestible microplastics.

Two spills occurred in the North Pacific, resulting in mass amounts of debris dispersed along the shoreline of British Columbia. The container ship ONE Apus (Nov 2020) lost 1816 marine containers overboard, and the ZIM Kingston (Oct 2021) lost 109. Debris from these spills are washing up along the shores of Vancouver Island and Haida Gwaii and will continue to inundate the coastal waters of B.C. and the North Pacific for years to come.

National Oceanic and Atmospheric Administration (NOAA), University of Hawaii Manoa/International, Pacific Research Center (UH/IRPC) team, and the Papahānaumokuākea Marine National Monument (PMNM) Law Enforcement Coordination Team are currently studying the movement of ONE Apus spill debris. Based on the recent discoveries of suspected ONE Apus debris from Vancouver Island to Haida Gwaii, Rugged Coast has collaborated with coastal First Nations, UH/IRPC, NOAA and DFO to determine the spread of ZIM Kingston and ONE Apus container ship debris. In addition to conducting aerial and ground surveys at known high accumulation points along the West Coast of Vancouver Island, RCRS has created a photo catalogue and debris list of suspected ZIM Kingston and ONE Apus debris through collaborations with various organizations.

Ongoing efforts are required to collect and compile data on the extent of debris from these spills. RCRS has developed methodology and data collection using the Survey123 app, which anyone can use. We hope that attributing debris to specific incidents, past and future, will ensure the polluter is held accountable for removing this debris and pays in full for environmental damages.

If you believe you have found debris related to the ONE Apus, and/or ZIM Kingston spill, please call the Coast Guard's Marine Pollution Reporting Line at 1-800-889-8852 to report any suspected sightings, and enter your debris findings into RCRS's Survey 123 application as follows.

The following survey methodology can be utilized to quickly and effectively document potential ZIM Kingston and ONE Apus debris. The method contains two parts, aerial survey and ground survey. A low fly aerial survey is used to maximize shoreline survey distance. While a ground shoreline survey is being used to collect a more representative data set.

- Ensure that datum is set to WSG 84 on the Survey123 application.
- Google maps, google earth, Navionics and Gaia are set to WSG84.

AERIAL SURVEY

1. Fly as low and slow as the pilot is comfortable to ensure a good line of sight with the shoreline.
2. Record start coordinates.
3. Record detected debris data and take photos using the Survey123 application.
4. Record survey end coordinates.
5. Ensure that all data is recorded and compiled into the Survey123 application.
6. Submit data points from the Survey123 application once back in cell service or Wifi connection.
7. Input survey data into Survey Data spreadsheet and upload to google drive folder.

SHORELINE SURVEY

1. Record start coordinates.
2. Using three field technicians, traverse along the shoreline parallel to one another, evenly spaced out between water line to tree line. If completing a shoreline survey with one crew member, traverse the survey limits a total of three times to ensure coverage of the shoreline.
3. Walk slowly recording data into the Survey123 application.
4. Record survey end coordinates.
5. Ensure that all data is recorded and compiled into the Survey123 application.
6. Submit data points from the Survey123 application once back in cell service or Wifi connection.

TO DOWNLOAD SURVEY123 CLICK AN OPTION BELOW:



SURVEY 123 INSTRUCTIONS

1. Scan QR code or follow the Survey123 link [HERE](#) to download the survey form while in cell service or internet connection.
2. **Continue without signing in**
3. Input relevant data into the form using debris terminology from the Photo Catalogue resources.
4. Save in outbox if out of cell/wifi.
5. Be sure to click Send once back in cell service or wifi connection.
6. Be sure to update the Survey form if prompted by the app
7. Photo reference can be downloaded [HERE](#)
8. If you have any questions please email info.ruggedcoast@gmail.com

