**External Geography Package**

**1.0 Introduction**

The Meteorological Services of Canada (MSC) is responsible for maintaining a standardized package of GIS (Geographical Information System) based MSC forecast location shapefiles and polygons. The current package is version 6.8.0 and corresponds to the environment that is expected to be operational in **April 2023**.

The External Geography sub-Package contains GIS material that is used to support activities for which Environment and Climate Change Canada (ECCC) is only a part of, and is not the originator or owner of the information. The decisions made as to what the material represents was done externally to ECCC - and ECCC is just a user; or was done in conjunction with ECCC - and ECCC was just the builder. In all cases ECCC has a vested interest in this material and is making it available to users since MSC references this material in some of the MSC publicly distributed products.

Considering there are multiple shapefiles with information that are gathered from external sources, MSC has prepared a separate External Geography sub-Package as an add-on sub-component of the MSC Geography Package. The shapefiles for this external information do not have the same full treatment as given to ECCC’s own datasets.

Please note that there might be additional shapefiles added to the External Geography sub-Package in future releases of the MSC Geography Package.

**2.0 Data Format**

The data in the External Geography sub-Package are only available in the format of shapefile and does not have as rich a treatment with regards to depictions, projections and metadata. Each external shapefile was built with the information available.

**2.1 External Shapefiles**

**2.1.1 UGCStdZone**

The UGCStdZone shapefile is a collection of forecast location polygons at the Tsunami Program sub region level. These are used in Alaskan Tsunami Center for warnings, watches and advisories. In UGCStdZone, each individual shape defines a location that is considered either a sub division of the “standard” or a duplicate of the “standard” used in the U.S. Tsunami Program. The U.S. has extended the UGC (Universal Geographic Codes) code set to Canadian areas to provide continuity of service for tsunami forecasting. These locations were built in collaboration with ECCC. This shapefile set only consists of terrestrial-based polygons from British Columbia, Quebec, and all the Atlantic provinces.

**2.1.2 TsuBPUSite**1

The TsuBPUSite shapefile is a collection of forecast location points that represents unbounded breakpoint locations, which are used in the Alaskan Tsunami Center as additional information in their warnings, watches and advisories. These locations were built in collaboration with ECCC and for B.C. with Emergency Management B.C. This is a shapefile containing number of point locations in province of New Brunswick, Nova Scotia, Newfoundland and British Columbia.

**2.1.3 TsuWAUSite**1

The TsuWAUSite shapefile is a collection of forecast location points that represents unbounded tsunami wave arrival locations, which are used in the Alaskan Tsunami Center as additional information in warnings, watches and advisories. These locations were built in collaboration with ECCC and for B.C. with Emergency Management B.C. This is a shapefile containing number of point locations in province of New Brunswick, Nova Scotia and Newfoundland.

**2.1.4 MarDenZone**

The MarDenZone shapefile is a collection of Danish Marine program forecast locations that fully or partially overlap with Canadian marine MetArea responsibilities.

**2.1.5 MarUSZone**

The MarUSZone shapefile is a collection of U.S. Marine program forecast locations that fully or partially overlap with Canadian marine MetArea responsibilities.

**2.2 Projection**

The coverage depiction chosen for the shapefiles in the External Geography sub-Package is equivalent to the detailed depiction used in the MSC Geography Package. As a shapefile with a Geographical Coordinate System, it includes the following components:

* Three-dimensional reference system
* The unit of measure is in decimal degrees
* Points have two coordinate value: latitude and longitude measured in angles
* Prime Meridian is Greenwich
* Datum is D\_North\_American\_1983