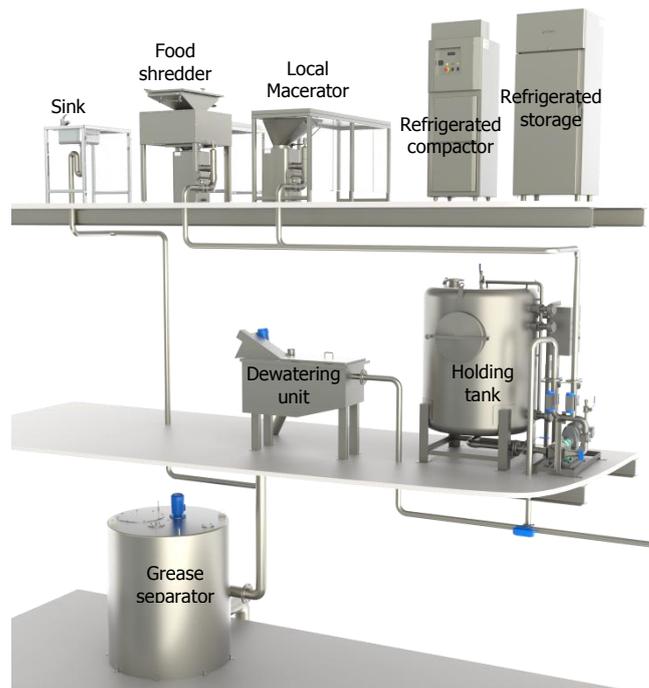


Control your food & galley waste

Food and galley waste quickly starts growing bacteria and should be collected and stored in a hygienic and controlled way. The fractions food waste and cooking oil are collected in separate closed holding tanks, while food contaminated waste is compacted and stored refrigerated to avoid smell and bacteria growth.

A dewatering unit can be installed downstream of a holding tank when discharge to the sea is prohibited or if zero discharge policy is used. The dewatered food waste can be stored in refrigerated areas.

All galley grey water from the scuppers and sinks, containing grease, fat or oil, should pass a grease separator before it is discharged to the grey water tank. This is done to avoid discharge of any cooking oil², protect piping from grease/fat contamination as well as to protect downstream treatment systems. The grease/fat/oil can be pumped to a sludge/grease holding tank.



Food & Galley waste are regulated by **IMO Marpol 73/78 Annex V** as well as by regional authorities such as US Coast Guard and EU member states. In general these waste streams are to be kept separate for discharge control as well as for hygienic reasons. In addition sewage treatment plants are not capable of receiving large quantities of food or grease from galley. In case mixing of waste is still done the most stringent regulation will apply.

Food waste - IMO Marpol 73/78 Annex V with Guidelines

A separate holding tank for grounded food waste should be installed if the system will be used when the vessel is;

- (a) in port,
- (b) less than 3 nautical miles¹ from the nearest land *outside Special Areas* or
- (c) less than 12 nautical miles from the nearest land *inside Special Areas*

1) For rigs and vessels within 500 meters the distance is less than 12 nautical miles from nearest land

- **Grey water** is not regulated under Marpol 73/78*
- **Grey water mixed** with **food waste** or **cooking oil**² is regulated under Marpol 73/78 **Annex V**
- **Black water/sewage** is regulated under Marpol 73/78 **Annex IV**

2) From Jan 2013 cooking oil is prohibited for discharge according to Amendment in Marpol 73/78 **Annex V**

About Uson Marine

Uson Marine has been a leading provider of sustainable waste management systems for the maritime and offshore industry since 1983. We help our customers reduce the environmental impact of their operations and thus improve their environmental profile. This, in turn, contributes to securing and increasing their long-term revenue.

We have the solutions, know-how and experience to help our customers minimize the cost and labour of waste handling onboard their rig or vessel, and ensure that they comply with the relevant rules and regulations. We support our customers at every stage, including: surveys, design, installation, commissioning and training of the crew.

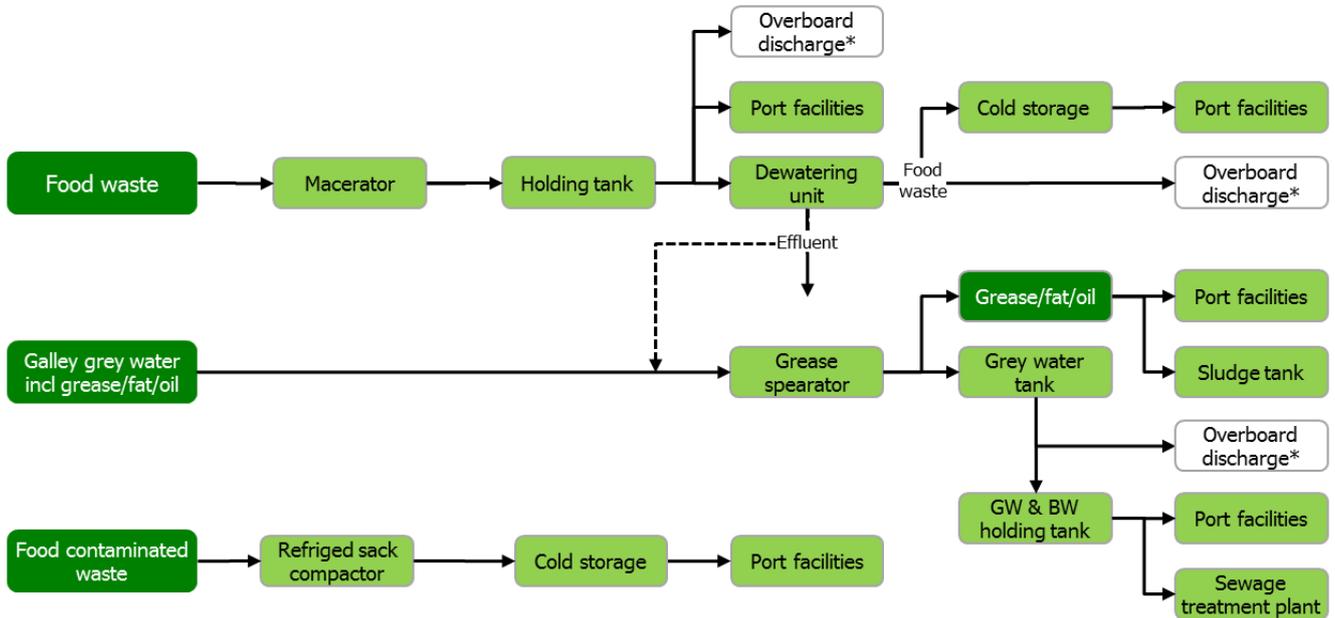
Uson Marine is certified for ISO 9001 & 14001 by DNV and certified in Achilles Joint Qualification System (www.achilles.com)



Uson Food & Galley Waste Handling Systems

Recommended handling for Food & Galley waste streams:

The chart below shows a typical flow chart for food and galley waste. Contact Uson for more information.



*) Depending on zero discharge policy.

Example of layout of complete Food & Galley waste system:

Below are examples of food and galley waste equipment. Contact Uson for more information.

