



*Washington  
Department of*  
**FISH and  
WILDLIFE**

Washington  
Coastal Dungeness Crab Fishery

**Electronic Monitoring Program  
Compliance Guide**

**This compliance guide was prepared by WDFW to provide a summary of how vessel operators can comply with regulations implementing electronic monitoring in the Washington coastal Dungeness crab fishery (WAC 220-340-420). The statements in this document are intended solely as guidance. Any discrepancies between this guide and WAC 220-340-420 will be resolved in favor of WAC 220-340-420.**

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# 1 Introduction

The purpose of this guide is to help participants in the Washington coastal Dungeness crab fishery understand how to comply with electronic monitoring (EM) regulations (WAC 220-340-420). Section 1 provides general information, including who to contact for help. Section 2 provides EM system purchase and installation information. Section 3 details vessel operator responsibilities and tasks. Section 4 describes two types of exemption permits in case of technology failures or emergencies, and how to obtain them, and Section 5 describes the steps to take when departing the fishery.

## 1.1 What is EM?

EM is a vessel monitoring system that automatically determines a vessel's position using global positioning system (GPS) coordinates, records individual pot retrieval via a hydraulic pressure reading, and transmits this information to an EM service provider. These systems are similar to satellite VMS required for participation in some federal fisheries but provide more accurate and timely data to meet coastal crab fishery management needs at a lower cost.

## 1.2 When is EM Required?

Any vessel designated to a Washington coastal Dungeness crab license that is used to commercial fish for coastal Dungeness crab shall have on board an EM system that is operated consistent with WAC 220-340-420 section (12) while fishing for coastal Dungeness crab. Commercial crab fishing is defined in [WAC 220-340-400](#): as any taking, fishing, use, or operation of gear to fish for crab for commercial purposes, and includes the possession of crab on the water for commercial purposes, and the landing or initial delivery of crab for commercial purposes. In short, if you have crab on board or crab gear in the water you are commercially fishing for Dungeness crab and are required to have an operational EM system activated 24 hours a day.

## 1.3 Who is responsible for installing EM?

The operator of the vessel designated to the commercial coastal Dungeness crab license is responsible for ensuring an operational EM system is active on a vessel commercial fishing for Dungeness crab.

## 1.4 Contact Information

For assistance contact the EM Program Team and/or the EM Program Manager. [Activation reports \(Section 3.2\)](#), and [requests for exemption permits \(Section 4\)](#) or [Long-term Departure reports \(Section 5\)](#) will be submitted using the EM Program Team email below.

### EM Program Team

48 Devonshire Road, Montesano, WA 98563

Phone: 360-249-4628

Email: [coastal.crab.EM@dfw.wa.gov](mailto:coastal.crab.EM@dfw.wa.gov)

### EM Program Manager

Robert Morgan

Phone: 360-480-8596

Email: [Robert.morgan@dfw.wa.gov](mailto:Robert.morgan@dfw.wa.gov)

# 2 EM System Purchase and Installation

The operator of a vessel designated to a coastal Dungeness crab license that participates in the coastal commercial Dungeness crab fishery, shall obtain an EM system and have it installed on board the vessel

designated to the coastal Dungeness crab license (WAC 220-340-420). EM system installation and operation should be in accordance with the instructions provided by the EM system provider and recommendations in sections 2.1 and 2.2.

## 2.1 System Requirements

Please review WAC 220-340-420 for all EM system requirements, here is clarifying information for some requirements:

- Provide a feedback mechanism to indicate to the vessel operator that the system is operational. This could be a light, function test, mobile application, or other way to alert the operator that the system is working properly.
- Have a hydraulic pressure sensor installed in the main high-pressure hydraulic line supplying the crab block where commercial Dungeness crab gear is hauled so that increases in pressure from gear hauling would be recorded during commercial crab fishing. Installing the hydraulic pressure sensor in a way that would prevent the system from determining increases in hydraulic pressure would be a violation of WAC 220-340-420.
- Accurately record a vessel's activity 24 hours per day while commercial crab fishing. WDFW recognizes that data capture could be subject to failures beyond a vessel operators control such as cellular service disruptions, device failure, etc.

## 2.2 EM Provider Recommendations

To meet requirements of WAC 220-340-420, vessel operators need to ensure the systems and service providers can:

- Record and relay the data fields listed in Table 1 to the Pacific States Marine Fisheries Commission (PSMFC) whenever a new system is installed, or new data transmissions begin.
- Record and relay the data fields listed in Table 2 to PSMFC at least once every hour. If an EM system can determine when a vessel is moored, defined as transmitting from the same location for more than one hour or in a geographic area known as the vessels usual mooring station, the EM system provider may automatically decrease the data recording rate to at least once every hour as defined in WAC 220-340-420 (b)(i)(F). Once a vessel becomes unmoored, the recording rate shall revert to at least once every minute as defined in WAC 220-340-420 (b)(i)(A)(D). Make data accessible to PSMFC through an Application Programming Interface (API) or a similar option providing automated data access.
- Maintain adequate customer service to keep systems operational and respond to service requests within 24 hours.
- Maintain the confidentiality of location data and personal information of participating vessels and operators.
- Provide service reports to the WDFW EM Program on system failures.

**Table 1. Required Vessel EM Device Data Fields**

Data Field Name	Description	Data Type	Example
VESSEL_CG_NUMBER	Coast guard vessel number or state vessel registration number if not federally registered	Text	123456 or WN12345
VESSEL_STATEREG_NUMBER	WDFW vessel registration number(5 digit number on crab license)	Text	12345
REG_STATE	State of registration	Text	WA
LOGGER_ID	Serial number or unique identifier linked to EM device - defined by the vendor	Text	AB123456
VENDOR_NAME	EM service provider information	Text	Acme Fishing Services
UNIT_TYPE_NAME	Name of the make/model of device - defined by the vendor	Text	Track Checker 2
START_DATE	Date system was installed or started transmitting data	Date	2022-11-01
END_DATE	Date system was removed or stopped transmitting data	Date	2022-12-01

**Table 2. Required Location, Pressure, and Speed Data Fields**

Data Field Name	Description	Data Type	Units	Example
LOGGER_ID	Serial number or unique identifier linked to EM device - defined by the vendor	Text		AB123456
DATE_TIME		Date Time	Pacific local time	2023-03-30 04:56:31.000
LATITUDE		Numeric	Decimal Degrees	46.907273
LONGITUDE		Numeric	Decimal Degrees	-124.108898
PRESSURE_1	From hydraulic pressure sensor	Numeric	PSI	387.5
PRESSURE_2	Only required if multiple pressure sensors are needed	Numeric	PSI	275.75
SPEED	Calculated from distance/time between previous GPS location	Numeric	NM	5.5
VESSEL_NAME		Text		Miss Fish

### 2.3 Installation Recommendations

During installation, the vessel operator should be available to assist the EM service provider in determining the best wiring routes, hydraulic pressure sensor location, and location of the unit itself. Initial installation will take approximately 4-5 hours. No standard installation configuration will cover all

participating Dungeness crab vessels. Vessel operators will need to work with providers to customize installation of EM equipment and wiring based on individual vessel needs that meet all conditions of the most current Compliance Guide. Some EM providers provide instructions for operators to install EM systems themselves to save on installation costs. Note, it is required for vessel operators to make the EM system available for inspection by WDFW Enforcement personnel, USCG personnel, or any authorized officer according to WAC 220-340-420(12)(b)(viii).

## 2.4 EM Provider Contact Information

A list of EM system providers that can potentially meet WDFW’s system requirements are listed in Table 3.

**Table 3. EM System Providers**

Company Name	Device	Contact Email	Contact Number
Archipelago Marine Research	FishVue LIME	<a href="mailto:info@archipelago.ca">info@archipelago.ca</a>	<b>(250) 383-4535</b>
Woods Hole Group	WD 300 Sentry	<a href="mailto:fishingsales@woodsholegroup.com">fishingsales@woodsholegroup.com</a>	<b>(508) 540-8080</b>
Viatrax	Boat Command VMS	<a href="mailto:support@viatrax.com">support@viatrax.com</a>	<b>(918) 824-1400</b>
This list is not comprehensive and other EM system providers may be available. If you are an EM system provider that can meet the EM system requirements and are interested in being added to this list contact: <a href="mailto:coastal.crab.EM@dfw.wa.gov">coastal.crab.EM@dfw.wa.gov</a>			

## 3 Operational EM Requirements

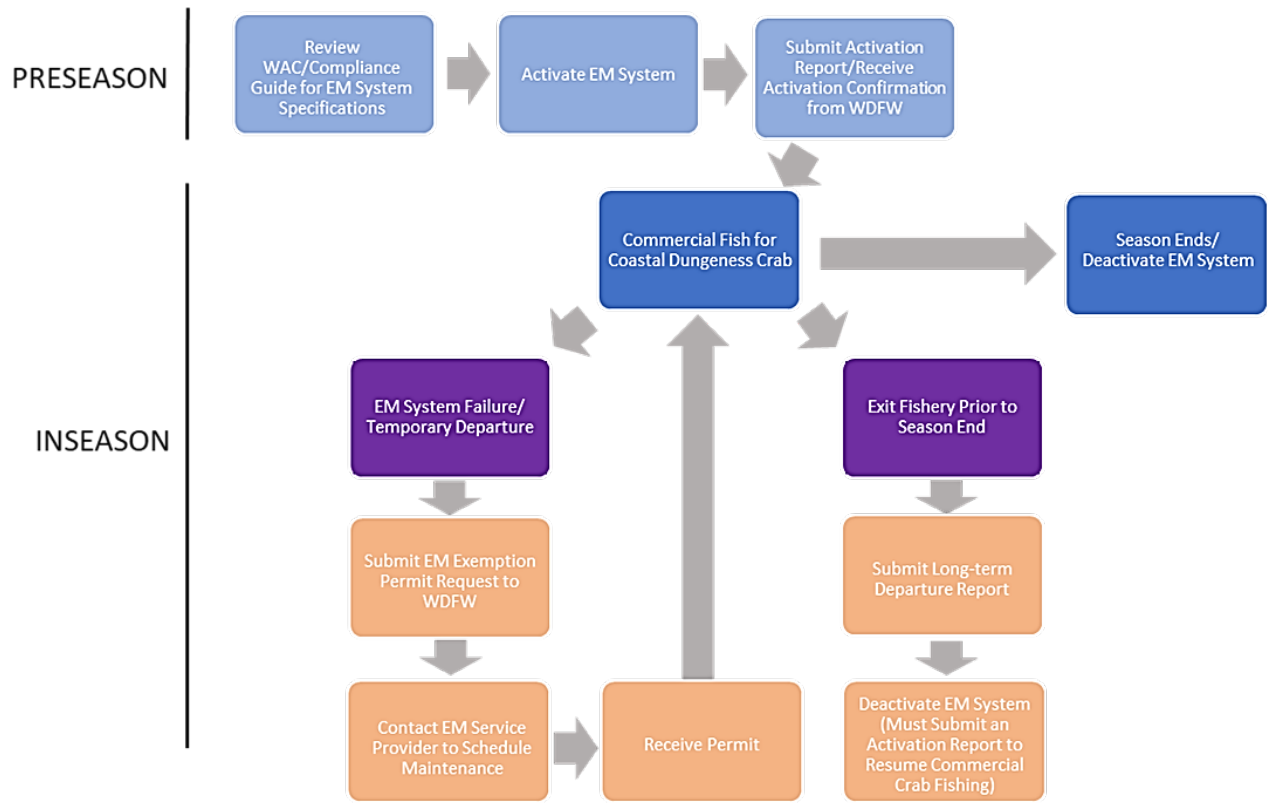
This section will help vessel operators determine what is necessary to be compliant with EM regulations while operating a commercial Dungeness crab vessel.

### 3.1 General Requirements

Vessel operators will need to:

- Ensure all charges levied by the service provider are paid as necessary to ensure continuous operation of the EM system.
- Make the EM system available for inspection by WDFW Enforcement personnel, USCG personnel, or any authorized officer.
- Ensure that the EM system is not tampered with, disabled, or destroyed and is operated, and maintained according to the EM system provider instructions.
- Follow the EM procedures outlined in Figure 1 and sections 3-5

**Figure 1. EM System Procedures**



### 3.2 Activation Reports

After initial installation, and prior to the start of every coastal Dungeness crab season, ensure the unit is supplied power and activated. Check the EM device’s feedback mechanism to determine if the device is in proper working order. This may be located on a separate app, a light on the device, etc. Once this is done the vessel operator must submit an EM Activation Report to the EM Program Team either by mail, email or online form. EM Activation Reports can be obtained by contacting the EM Program Team or online at: <https://wdfw.wa.gov/fishing/commercial/crab/coastal/electronic-monitoring#activation> .

Or scan this code:



The EM Program Team will provide confirmation that your system is working to the preferred contact method listed on the EM Activation report. Note, it could take 5 days to receive the required confirmation from WDFW.

Vessel operators will need to submit an activation report prior to the start of every coastal Dungeness crab season **and** when:

- Initially installing or reinstalling an EM system.
- Switching EM service providers.
- Resuming fishing operations after submitting a long-term departure exemption report.
- Making any changes to the information contained in the EM Activation Report (this includes when designating a new vessel to a coastal Dungeness crab license).

### **3.3 Pre-trip check**

Before each trip and prior to leaving port, the vessel operator needs to ensure the EM system is operational by checking the device's feedback mechanism. If the system is not operational the vessel operator should follow the EM service provider's basic troubleshooting instructions. If the vessel operator cannot resolve the issue, they should immediately contact their EM service provider for maintenance and must immediately contact WDFW staff for an EM system failure exemption permit by following the instructions in the Temporary EM Exemption Permit section (4) of this guide.

### **3.4 During the trip**

While fishing, the vessel operator is expected to perform system maintenance including checking that the system is still functioning, ensuring that the EM system is not tampered with, disabled, or destroyed and is operated, and maintained according to the EM system provider instructions. If the vessel operator determines the EM system has failed during a trip, they should immediately contact their EM service provider for maintenance and must immediately contact WDFW staff for an EM system failure exemption permit following the instructions in **Section 4** of this guide.

### **3.5 Between trips**

The vessel operator must ensure the system remains on and is fully operational between trips.

### **3.6 End of Season**

The vessel operator must leave the EM system on and may only turn off the system after their last WA Dungeness crab landing of the season and all gear has been removed from the water. If the current WA coastal Dungeness crab season is still underway, a long-term departure report must be received by WDFW. See **Section 5** for information on long-term exemption reports.



# Do I need an EM Exemption Permit or a Long-term Departure Report?

## EM Exemption Permit

- EM System Failure
- Emergency (fire, flooding, etc.) that deactivates the EM system for less than 14 days
- Haul out/shipyard work lasting less than 14 days when power will be cut to the EM system
- Any other scenario that causes a break in the transmission of data from, or loss of power to, an EM system while commercial crab fishing

## Long-term Departure Report

- Pulled all D. crab gear and do not intend to commercial fish for D. crab for the remainder of the season
- Emergency (fire, flooding, etc.) that deactivates the EM system for more than 14 days
- Haul out/shipyard work lasting more than 14 days when power will be cut to the EM system

## 4 EM Exemption Permits

A vessel must be equipped and operate with an EM system continuously 24 hours a day when fishing in the coastal Dungeness crab fishery. Vessels may be temporarily exempted from this requirement if a valid WDFW EM Exemption Permit is received from WDFW and the vessel is in compliance with all conditions and requirements of the EM system exemption identified in WAC 220-340-420 (b)(v). EM Exemption Permits are valid for 4 days. After 4 days, vessel operators must request an extension or submit a long-term departure report (see Section 5). Vessel operators must fill out an electronic or paper logbook while operating under an EM Exemption Permit and must submit them within 10 days of any landing while commercial crab fishing without an operational EM system. In addition, vessel operators must use navigational equipment (including, but not limited to, chart plotters, hand-held GPS units, cell phone, etc.) to record a track line of the vessel's movements while commercial crab fishing, and this information must be made immediately available to WDFW Enforcement Officers upon request and retained for 30 days from the date the EM Exemption Permit expired.

### 4.1 When is a permit required?

An EM Exemption Permit is needed when:

- A vessel has an EM system failure that cannot be resolved immediately.
- A vessel is informed of a system failure by WDFW staff or the EM service provider.
- The vessel will be hauled out of the water but intends to resume commercial crab fishing in the same season.
- An emergency incapacitates the vessel, but the vessel intends to resume commercial crab fishing after resolving the situation.

## 4.2 EM System Failure Exemption Permit:

Vessels may be temporarily exempted from EM system requirements in situations due to EM system failure or interruption by obtaining an EM System Failure Exemption Permit. This includes failures to the hydraulic pressure sensor, GPS location systems, or any other part of the EM system that prevents data transmission.

## 4.3 Haul Out Exemption Permit

This permit is required if a vessel operator intends to cut power to the EM system in the process of hauling the vessel out for various reasons such as, routine maintenance, shipyard work, etc. and intends to resume fishing in the current coastal Dungeness crab season. Otherwise, a long-term departure report must be submitted.

## 4.4 Emergency Exemption Permit

Vessels that experience an emergency including but not limited to fire, flooding, or extensive physical damage to critical areas may request an Emergency Exemption Permit. This permit is only required if the vessel operator intends to resume participation in the current coastal Dungeness crab season following vessel repair. Otherwise, a long-term departure report must be submitted.

## 4.5 Obtaining an exemption permit

EM System Failure Exemption Permits are available 24 hours a day at:

<https://wdfw.wa.gov/fishing/commercial/crab/coast><https://wdfw.wa.gov/fishing/commercial/crab/coastal/electronic-monitoring#em-exemptional>.

Or scan this code:



Submit the form to receive a confirmation email. This confirmation email is your permit and will need to be presented to WDFW enforcement if requested.

Exemption Permits can also be requested by sending a text or email to the EM Program Team that contains the operator's name, vessel name, coastal crab license number and nature of the system failure. The EM Program Team will respond to these requests and issue a permit during normal business hours. The request text or email must be saved as confirmation of a valid permit until the operator receives a permit from WDFW staff. Permits are valid for 4 days from the time the request text or email is sent.

## 4.6 How to reactivate an EM system before an exemption expires

If the situation for which an exemption was issued is resolved before the exemption expires, the vessel operator should verify the system is operational before resuming fishing. This could be done by the technician servicing the system, by the operator verifying the vessel is transmitting data to a vessel viewing app or by contacting EM program staff. The vessel may be required to submit an activation report due to a change in EM system ID or other reason listed in section 3.2 before resuming fishing.

#### **4.7 EM exemption permit extension**

If the situation for which an exemption was issued cannot be resolved before the exemption expires, contact the EM Program Team to get an extension before your permit expires. Do not submit a new exemption permit request. Extensions can be requested by sending a text or email to the EM Program Team that contains the operator's name, vessel name, coastal crab license number and details on why the extension is needed. The extension request text or email shall be saved as confirmation of a valid extension until the operator is contacted by WDFW staff to confirm the extension and issue a new permit. The EM Program Team will respond to these requests and issue a permit during normal business hours.

### **5 Long-term Departure Reports**

Long-term departure reports are submitted when a vessel no longer intends to commercially fish for Dungeness crab in the current season.

#### **5.1 When to submit a long-term departure report**

A report would need to be submitted anytime a vessel plans on not participating in the fishery for an extended period before the current season has ended. For example, a vessel operator that pulls all their crab gear and goes to participate in another fishery would have to submit a departure report. If a vessel participates until the season ends on Sept 15<sup>th</sup> a departure report would not need to be submitted.

#### **5.2 How to submit a long-term departure report**

Departure reports can be submitted by text or email by contacting the EM Program Team and providing the vessel name, coastal Dungeness crab license number and date of departure from the fishery. The departure date would be the date of the vessel's last landing or the date the last of the vessel's gear was removed from the water, whichever is later.

#### **5.3 How to participate in the fishery after submitting a departure report**

If a vessel intends to resume fishing within the same season at a later date and after submitting a departure report, the vessel operator must submit a new activation report.