

## **Clarification on the temporary drum line deployment aspect of the Western Australian Shark Hazard Mitigation Drum Line Program 2014-17**

The deployment of temporary drum lines in all Western Australian waters at all times throughout the year was included as part of the Public Environmental Review (PER) and formed part of the key characteristics table (p-6). Specific criteria was developed to define the operational response to a shark considered to be posing a threat to public safety, or following an incident, within the Marine Monitored Areas (MMA) (the Criteria) (Section 7 of the Operational Environmental Management Plan) (the Plan).

The Department of Fisheries (DoF) has Guidelines for fishing for sharks posing an imminent threat to public safety (the Guidelines) which have been in place since late 2012. Prior to the submission of the PER, the Guidelines defined the operational response to sharks considered to be posing an imminent threat to public safety in all Western Australian waters at all times of the year.

The Criteria under the Plan were developed specifically for the MMAs, in considering a vessel would be on the water for up to twelve hours a day, seven days a week, therefore providing the potential for faster responses to identified shark hazards within the MMAs compared to the response time possible under the DoF Guidelines.

It has since been identified that the inclusion of “all Western Australian waters at all times throughout the year” in the PER means that the DoF Guidelines are inadvertently superseded by the Criteria developed for a response within an MMA. This has resulted in an unintentional impact on DoF policies and procedures and operational inconsistencies regarding when, how and by who, responses to identified shark hazards can be managed.

In considering the short timeframes, high pressure environment and levels of risk associated with responding to identified shark hazards or incidents, it is preferable to resolve any operational obstacles as early as possible.

This clarification of the Program aims to make clear the jurisdictional authority, and separate the operational procedures, for responding to identified shark hazards within and outside of MMAs, by redefining the detail in the key characteristics table and Sections 1.4, 3 and 7 of the Operational Environmental Management Plan (the Plan) and updating the Criteria under the Plan.

It should be noted that this clarification does not negatively affect the considerations or findings of the environmental impact assessment as presented in the PER. On the contrary, the DoF Guidelines for responding to shark sightings are more conservative than the Criteria under the Plan, thereby reducing even further the remote likelihood of deployment of temporary drum lines outside of the geographic and temporal boundaries of the MMAs.

## Clarification of the PER key characteristics table

Proposal title	Western Australian Shark Hazard Mitigation Drum Line Program 2014-17	
Proponent name	The State of Western Australia (Department of the Premier and Cabinet)	
Project duration	<p><b>Static drum lines:</b> set between 15 November and 30 April each year for a period of three years, commencing 15 November 2014 and ceasing 30 April 2017.</p> <p><b>Temporary drum lines:</b> may be set within the MMAs between 15 November and 30 April each year for a period of three years, commencing 15 November 2014 and ceasing 30 April 2017. Outside of these times, and outside of the MMAs, to 30 April 2017, the DoF Guidelines<sup>1</sup> and associated operating procedures for deployment of temporary drum lines apply.</p>	
Short description	<p><b>Static drum lines:</b> Up to 60 static baited drum lines approximately 1km offshore of popular swimming beaches and surf breaks within MMAs in the metropolitan and south west coastal regions of Western Australia. Static drum lines will not be deployed in any marine recreational or sanctuary zones or Fish Habitat Protection Areas.<sup>2</sup></p> <p><b>Temporary drum lines:</b> up to 12 temporary drum lines set within MMAs in the metropolitan and south west coastal regions of Western Australia in response to identified shark threats or incidents. Outside of the geographic and temporal extent of the MMAs the DoF Guidelines<sup>3</sup> and associated operating procedures apply for deployment of temporary drum lines apply.</p>	
Element	Location/Description	Authorised Extent
The placement of up to 60 static drum lines and up to 12 temporary drum lines, within the geographic and temporal extent of the MMAs	<p>Located within the MMAs as shown in Figure 3.</p> <p>Figure 4 - Metropolitan MMA: from Ocean Reef to Port Beach and to approximately 1km offshore.</p> <p>Figure 5 - South west MMA: from Quindalup to Prevelly and to approximately 1km offshore.</p> <p>The area of the metropolitan MMA is 34km<sup>2</sup> (3 400ha) and is 35km long.</p> <p>The total area of the south west MMA is 81km<sup>2</sup> (8 100ha) and covers 85km of the coastline. Drum lines will be set within a minimum of 28km<sup>2</sup> (2 800ha) of state waters and along 29km of the coastline, and within a maximum of 48km<sup>2</sup> (4 800ha) of state waters and along 52km of the coastline during the south west deployment.<sup>4</sup></p>	<p>Metropolitan MMA: from Ocean Reef (-31° 44.6038', 115° 43.3727') to Port Beach (-32° 2.4354', 115° 44.4630') and to approximately 1km offshore.</p> <p>South west MMA: from Quindalup (-33° 37.8569', 115° 8.9470') to Prevelly (-33° 58.9200', 114° 59.3834') and to approximately 1km offshore.</p> <p>The two MMAs account for approximately 0.05-0.07% of all Western Australian waters and approximately 0.5-0.7% of the Western Australian coastline.</p> <p>Temporary lines would be monitored for up to one hour (per response) in response to a sighting<sup>5</sup> and for up to one week (per incident) in response to an incident.</p>
The deployment of temporary drum lines outside of the geographic and temporal extent of the MMAs	Outside of the geographic and temporal extent of the MMAs (i.e. all of Western Australian waters at all times throughout the year, with the exception of within the MMAs between 15 November and 30 April).	As per the DoF Guidelines and associated operating procedures.
Target species within the geographic and temporal extent of the MMAs	Static drum lines, and temporary drum lines in response to a sighting: Any white shark ( <i>Carcharodon carcharias</i> ), tiger shark ( <i>Galeocerdo cuvier</i> ) or bull shark ( <i>Carcharhinus leucas</i> ) with a total length of three metres or greater.	

<sup>1</sup> The Department of Fisheries "Guidelines for fishing for sharks posing an imminent threat to public safety".

<sup>2</sup> Refer to Section 2.5 of the PER and Section 3.2.1 of the Operational Environmental Management Plan.

<sup>3</sup> The Department of Fisheries "Guidelines for fishing for sharks posing an imminent threat to public safety".

<sup>4</sup> Details on the timings and extent of the south west deployment are contained within the draft Management Plan.

<sup>5</sup> Any subsequent sightings will constitute a new response.

	<p>Temporary drum lines in response to an incident:  Any shark considered responsible for the incident.</p>	
<p>Target species outside the geographic and temporal extent of the MMAs</p>	<p>As per the DoF Guidelines and associated operating procedures.</p>	

## **Clarification on section 2.3 of the PER – Potential environmental impacts from the deployment of temporary drum lines in response to an identified shark threat or incident**

The Program includes a provision for the deployment of temporary drum lines throughout the year, anywhere in Western Australian waters, in response to identified shark threats or incidents until 30 April 2017. Between 15 November and 30 April each year for a period of three years, temporary drum lines may be set within the two designated MMAs in accordance with specific criteria (the Criteria as defined under Section 7 of the Operational Environmental Management Plan). As determined by the Criteria, up to five baited drum lines may be deployed in response to an identified shark threat or incident within the MMAs. Temporary drum lines deployed within an MMA would be set for a maximum of one hour (per response) in response to an identified threat, and monitored closely for the duration of their deployment. Lines set in response to an incident within an MMA would be set for a maximum of one week (per incident) and would be monitored closely during daylight hours for the duration of their deployment. Outside of the geographical and temporal extent of the MMAs the DoF “Guidelines for fishing for a shark posing an imminent threat to public safety” (the Guidelines) and associated operating procedures will apply to the deployment of temporary drum lines.

Consideration has been given to the potential environmental impacts resulting from the temporary deployment of drum lines within the MMAs and also to the potential for deployment under the DoF Guidelines in response to an incident or a shark considered to be posing a threat to public safety. The frequency with which a response is likely to be enacted is considered to be rare. Under the Guidelines, orders to deploy capture gear were issued by DoF on just three occasions between January 2013 and November 2013. During the 2013-14 summer drum line deployment trial program a direction to deploy temporary drum lines in the MMAs in response to a shark considered to be posing a threat to public safety was given five times. Of these, four were enacted in one day in response to the same shark moving southwards through near shore metropolitan waters. This constitutes eight deployments in more than 480 days, or roughly less than 2% of the time.

In the event that lines are deployed to target a specific shark, either within or outside an MMA, while the capture of a target shark cannot be guaranteed, lines would be closely monitored and therefore any environmental impacts, in particular to non-target sharks, can be minimised.

The risk assessment examining the potential environmental impacts of deploying static drum lines between November and April for three years, as outlined in detail in Section 4.2.3 is used as a basis for assessing the potential environmental impacts of the setting of temporary drum lines in response to an identified shark threat or incident.

## **Updated criteria for initiating a response to an identified shark threat or incident within the geographic and temporal extent of an MMA (Section 7 of the Operational Environmental Management Plan)**

A decision on the deployment of resources in response to an identified shark threat or incident within an MMA will be made by the DoF Operations Manager.

### *Shark sightings*

The following must be confirmed before initiating a response to a shark sighting within an MMA:

1. Report has been made within one hour of the sighting and response able to be in place within one hour of report being made.
2. Location is clear (e.g. land or ocean marker or GPS waypoint).
3. The sighting is credible. This assessment can take into account the source of the report (Surf Life Saving WA, commercial fisher, agency vessel) or be confirmed by contacting the individual reporting the sighting.
4. The shark is believed to have a length of three metres or greater and be within 1km of the shore.
5. Where possible the shark species is identified as a target species under the Program.
6. The DoF Operations Manager is satisfied that public safety is of concern (beach/es is/are occupied, shark remains in the vicinity, shark is close to shore etc.).
7. The Land Manager (or delegated authority) is requested to give effect to beach closure for the period of temporary drum line deployment.
8. In the event that the Land Manager will not or cannot agree to beach closures, the deployed vessel may still attend and deploy temporary drum lines.

An assessment of these circumstances should also consider whether there is a plausible reason to believe the shark sighting is likely to be temporary. In some circumstances there may be prevailing conditions such as the presence of a whale carcass, or seasonal fish aggregations which explain the presence of a shark. An assessment should be made as to whether the risk under these circumstances can be mitigated through other measures, such as beach closures, media announcements and close monitoring until the risk is considered to have passed.

Clarification on the following will assist in the confirmation and initiation of a response:

- Person reporting the sighting can explain how they determined the length of the shark and the detail is plausible.
- Length can be gauged in comparison to an object e.g. the reporter's water vessel or other visual marker.
- Person can explain how they determined distance from beach and the detail is plausible.
- Person can describe any patterns or particular features of the shark's body, assisting in species identification.
- Environmental conditions are favourable to water visibility.
- Sighting can be verified by another person (e.g. Surf Life Saving WA aerial patrol).

The following is the procedure to be followed to initiate a response to a shark sighting within an MMA:

1. Identify resources to support deployment operation (e.g. vessel availability, beach closures, aerial support).
2. Obtain verification that beaches have been cleared as appropriate.
3. Liaise with DPaW with regard to deployment in a marine protected area.
4. The deployed vessel attends and sets up to five baited drum lines.
5. Temporary drum lines in response to a sighting within an MMA are to be deployed for a maximum of one hour per response and monitored closely in that time. Any subsequent sightings will constitute a new response.

### *Shark Incident*

The following must be actioned in response to an incident within an MMA:

1. Following DoF standard operating procedures, a shark incident is confirmed to have taken place within the geographic and temporal extent of an MMA.
2. Resources identified to support deployment operation (e.g. vessel availability, beach closures, aerial support).
3. Verification obtained that beaches have been cleared as appropriate.
4. Liaison with DPaW with regard to deployment of temporary drum lines in a marine protected area complete.
5. The deployed vessel attends and sets up to five baited drum lines.
6. Drum lines are to be closely monitored during daylight hours for a maximum of seven days (per incident).
7. In considering a response to a fatality or a marine search and rescue (in the case of a missing body, or body part) the deployed vessel is to defer to DoF, WAPol or any other agency unit when requested to do so in line with the DoF standard operating procedures for responding to a shark incident.

In responding to an identified shark threat or incident within an MMA the Operational Environmental Management Plan and associated animal handling protocols must be adhered to at all times where practicable.

## **Clarification of trigger points at Section 4.6 in the Operational Environmental Management Plan**

In determining the cumulative totals for trigger points, animals caught on static or temporary drum lines, within an MMA, will be considered to contribute to trigger points. This will be in consideration of the following:

- (1) Animals released in a condition (1) (see 5.1.1) will be considered to have survived and not be counted towards trigger points.
- (2) Any animals released in a condition (2) or (3), notwithstanding information to the contrary such as might be obtained from satellite tag data (see 4.6.1), will be considered to have died for the purpose of determining cumulative mortality for trigger points.