COASTAL OIL SPILL CONTINGENCY PLAN

NO. 12: AMATHOLE ZONE (incl. No. 11: Ciskei)

environmental affairs

Department:
Environmental Affairs
REPUBLIC OF SOUTH AFRICA

Plan No:
Date of Issue: December 2010

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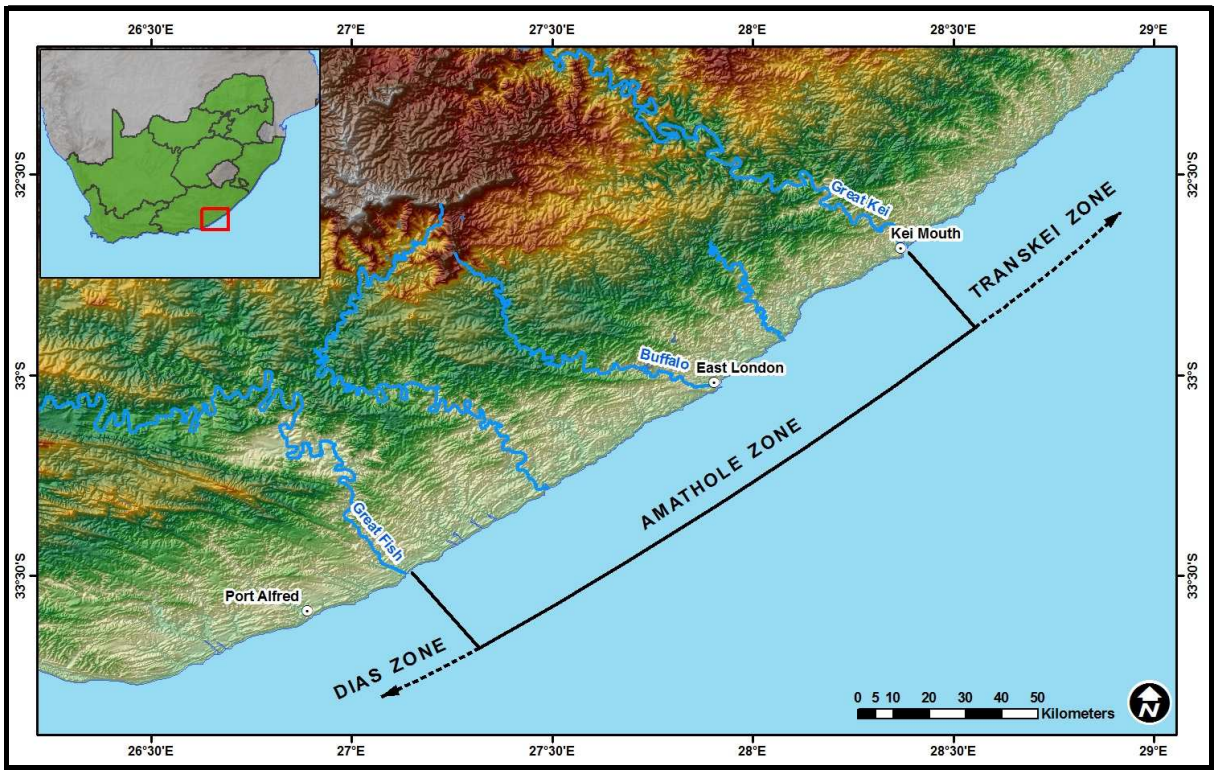
NO. 12: AMATHOLE ZONE
(Includes No. 11: Ciskei Zone)



RESPONSIBLE LOCAL AUTHORITIES:

Amathole District Municipality
Buffalo City Municipality
Great Kei Municipality
Ngqushwa Municipality
Eastern Cape Parks and Tourism Agency
Transnet National Ports Authority

Approved after due consultation with all stakeholders and authorities with responsibility to respond to coastal oil spills in terms of this Plan.

.....
Deputy Director General: Oceans and Coasts
Department of Environmental Affairs
CAPE TOWN
Date: 7 February 2011

environmental affairs
Department:
Environmental Affairs
REPUBLIC OF SOUTH AFRICA

ACKNOWLEDGEMENTS

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PREFACE

In terms of the Marine Pollution (Control and Civil Liability) Act 6 of 1981, the Department of Transport is charged with the responsibility of ensuring that the appropriate actions are taken in order to minimise the impact of discharges of harmful substances (e.g. oil) from ships, tankers, or offshore installations. In terms of the South African Maritime Safety Authority Act 5 of 1998, the majority of these responsibilities are transferred to the South African Maritime Safety Authority (SAMSA). Section 52 of the SAMSA Act, however, delegates the responsibility for combating pollution of the sea and shoreline by oil to the Minister of Environmental Affairs (DEA). The implication of this is that the DEA is responsible for protection and clean-up measures to be taken once oil has been released into the sea, while SAMSA's responsibilities are limited to those actions required while the oil is within the confines of the ship.

In effect this means that SAMSA is responsible for:

- overall co-ordination of the prevention and/or combating of an oil spill incident
- control of the technical aspects of shipping casualties
- supervision of oil transshipments
- prosecution of parties guilty of the deliberate discharge of oil
- compilation of contingency plans relating to the control of shipping casualties or potential casualties
- administering the Acts relating to oil pollution
- taking charge of the legal and financial aspects relating to oil spill incidents and casualties
- control of the use of the standby oil pollution prevention tug
- the issuing of pollution safety certificates for offshore installations.

The National Department of Environmental Affairs is responsible for:

- co-ordination and implementation of coastal environmental protection and clean-up measures
- control of the use of the pollution combating vessels and surveillance aircraft
- control of the use of oil spill dispersants and dispersant spraying operations
- maintenance and supply of oil dispersant stocks and other dedicated oil spill equipment
- compilation and maintenance of the DEA Local Coastal Oil Spill Contingency Plans
- the approval of contingency plans for offshore installations, in consultation with SAMSA.

The Provincial Departments of Environmental Affairs shall:

- assist the DEA in updating the Local Coastal Oil Spill Contingency Plans
- provide support in building capacity and awareness in the local authority organisations
- provide support to local authorities in the implementation of the Local Coastal Oil Spill Contingency Plans
- ensure that their MEC is kept informed of progress.

Local Authorities have an important role to play in dealing with oil spills. They are responsible for:

- taking specified measures to prevent or remedy adverse effects of the spill on the coastal environment
- providing assistance in the form of supervision, labour, transport and equipment for the protection and clean-up of their beaches, estuaries and other areas under their jurisdiction
- making arrangements with local Traffic and Police Officers to ensure traffic and crowd control in the vicinity of the impacted area.

DISTRIBUTION LIST

Doc. No.	Distribution
NATIONAL AUTHORITIES	
1201	Director-General: Department of Environmental Affairs (DEA)
1202	Chief Director: Integrated Coastal Management, DEA
1203	Deputy Director: Marine and Coastal Pollution Management, DEA
1204	Assistant Director: Marine and Coastal Pollution Management, DEA
1205	Pollution Officer: Marine and Coastal Pollution Management, DEA
1206	Director-General: Department of Transport
1207	Executive Head, Centre of Ships: Shipping, SAMSA
1208	Regional Manager: Eastern Region, SAMSA,
1209	Regional Manager: Western Region: SAMSA
1210	Regional Manager: Southern Region, SAMSA
1211	Principal Officer: East London, SAMSA
1212	Principal Officer: Port Elizabeth, SAMSA
1213	Principal Officer: Mossel Bay, SAMSA
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AMENDMENT LISTING

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AMENDMENTS

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Upon receipt of the amendments, the recipient is to verify its completeness and update his copy of the Plan accordingly, and then mail, or fax, the tear-off slip to the addressee given at the top of the tear-off slip. (See Appendix II)

Holders of the plan are to advise the Deputy Director: Marine and Coastal Pollution Management of any pertinent changes of telephone numbers, organisational structure or other information immediately it comes to their notice.

LIST OF ACRONYMS

AD	-	Assistant Director
ADM	-	Amathole District Municipality
BCM	-	Buffalo City Municipality
CLC	-	Civil Liability Convention for Oil Pollution Damage
CROW	-	Centre for Rehabilitation of Wildlife
CRU	-	Casualty Response Unit of SAMSA
DAFF	-	Department of Agriculture, Forestry and Fisheries
DEA	-	Department of Environmental Affairs
DEDEA	-	Department of Economic Development and Environmental Affairs (E. Cape)
DD	-	Deputy Director
DM	-	Disaster Management
DOT	-	Department of Transport
EBMO	-	Emergency Barriers from Materials of Opportunity (Report 1985)
ECO	-	Environmental Conservation Officer
ECP&TA		Eastern Cape Parks and Tourism Agency
EMP	-	Estuary/Environmental Management Plan
EPO	-	Environmental Protection Officer
IDZ	-	Industrial Development Zone
IOPC	-	International Convention on the Establishment of an International Fund for Compensation for Oil Pollution
JOC	-	Joint Operation Centre
JRC	-	Joint Response Committee
MCM	-	Marine and Coastal Management (now called Oceans and Coast)
MCPM	-	Marine and Coastal Pollution Management (of Oceans and Coast)
O&C	-	Oceans and Coast (DEA), previously MCM
OPCSA-		Oil Pollution Control South Africa
OPRC	-	International Convention on Oil Pollution Preparedness, Response and Cooperation
OSC	-	On-Scene Co-ordinator
P&I Club	-	Ship Owners Protection and Indemnity Insurers
PEC	-	Penguins Eastern Cape
PEPSAE	-	Probable Effectiveness of Protection of the SA Estuaries by Oil Booms (Report 1986)
PO	-	Principal Officer (SAMSA)
SAMREC		South African Marine Rehabilitation and Education Centre
SAMSA	-	South African Maritime Safety Authority
SANCCOB	-	South African National Foundation for the Conservation of Coastal Birds
SANParks	-	South African National Parks
SAPIA	-	South African Petroleum Industry Association
SCC	-	Shore Control Centre
SLO	-	Shore Logistics Officer
TNPA	-	Transnet National Ports Authority
UNCLOS	-	United Nations Convention on Law of the Sea

CONTENTS

PREFACE ..... **iii**

DISTRIBUTION LIST ..... **v**

AMENDMENT LISTING ..... **vii**

LIST OF ACRONYMS ..... **viii**

1. INTRODUCTION **1**

2. OBJECTIVE **1**

3. INTERFACE WITH OTHER PLANS **2**

4. ACTS AND AGREEMENTS RELATING TO OIL POLLUTION **4**

4.1 INTERNATIONAL CONVENTIONS **4**

4.2 NATIONAL LEGISLATION **7**

4.3 RESPONSIBLE AUTHORITIES **13**

5. FINANCIAL ARRANGEMENTS AND COMPENSATION OF COSTS **16**

5.1 POLICY ON PURCHASING 17

5.2 CLAIMS 17

6. PREPARATORY ACTIVITIES **21**

6.1 DEPARTMENT OF ENVIRONMENTAL AFFAIRS 21

6.2 MUNICIPALITIES / LOCAL AUTHORITIES 21

6.3 TRAINING AND EXERCISES 22

7. INITIAL REPORTING AND ACTIVATION OF THE PLAN **24**

7.1 REPORTING OF OIL SPILLS 25

7.2 LEVELS OF RESPONSE AND ACTIVATION 30

8. ORGANISATION 32

8.1 DEA and SAMSA ORGANISATION 32
8.2 JOB DESCRIPTIONS OF DEA AND RELEVANT SAMSA OFFICIALS 35
8.3 LOCAL AUTHORITIES ORGANISATION 38
8.4 JOB DESCRIPTIONS OF LOCAL AUTHORITY OFFICERS 39
8.5 FACILITIES 41
8.6 COMMUNICATIONS 42

9. RISK ASSESSMENT AND COASTAL SENSITIVITIES 44

9.1 IDENTIFICATION OF RISKS 44
9.2 HEALTH AND SAFETY 45
9.3 VULNERABILITY OF THE EATERN CAPE COASTLINE 45
9.4 COASTAL SENSITIVITY 46
9.5 PRIORITIES FOR PROTECTION AND CLEAN-UP 46
9.6 LISTING OF PRIORITIES 47
9.7 STRATEGY FOR PROTECTION AND CLEAN-UP 48
9.8 SITE SPECIFIC INSTRUCTIONS 49

10. SITE SPECIFIC RESPONSE 51

11. WASTE MANAGEMENT 100

12. EQUIPMENT - MATERIAL – MANPOWER 101

12.1 DEPARTMENTAL EQUIPMENT 101
12.2 TRANSNET NATIONAL PORTS AUTHORITY EQUIPMENT 101
12.3 SOUTH AFRICAN PETROLEUM INDUSTRY 101
12.4 COMMERCIAL CONTRACTORS 101
12.5 LOCAL AUTHORITY EQUIPMENT AND MANPOWER 102

13. TELEPHONE NUMBERS 103

13.1 PRIORITY NUMBERS 103
13.2 RESPONSIBLE LOCAL AUTHORITIES 105
13.3 RELEVANT GOVERNMENT DEPARTMENTS 107
13.4 SCIENTIFIC ADVISORY PERSONNEL AND I&AP'S 108
13.5 CONTRACTORS AND SERVICE PROVIDERS 109

APPENDICES

APPENDIX I	COST RECOVERY and EXPENDITURE LOG SHEET
APPENDIX II	AMENDMENT NOTIFICATION
APPENDIX III	TRAINING AND EXERCISE COMPLETION FORM
APPENDIX IV	LIST OF DEA EQUIPMENT
APPENDIX V	RECORD OF DECISION – JRC
APPENDIX VI	PRESS RELEASE / SITREP TEMPLATE

ADDENDA

ADDENDUM A	OIL RECOGNITION
ADDENDUM B	METHODS FOR COASTAL PROTECTION AND CLEAN-UP
ADDENDUM C	TEMPORARY STORAGE AND TRANSPORT OF OILY WASTE
ADDENDUM D	COLLECTION OF OILED SEABIRDS
ADDENDUM E	OIL SPAMPLING PROCEDURES
ADDENDUM F	POLICY ON THE USE OF OIL SPILL DISPERSANTS IN SOUTH AFRICAN WATERS

1. INTRODUCTION

This Oil Spill Contingency Plan covers the area for the Amathole region (including the Ciskei region), in the Eastern Cape. This Zone extends from the Great Fish River in the west, eastwards along the coast to the Great Kei River. The area includes the City of East London and the Port which is located on the Buffalo River. Much of the area adjacent to the coast is designated as Coastal Forest Reserve which is administered by the Eastern Cape Parks and Tourism Agency.

The Plan sets out the respective responsibilities of the South African Maritime Safety Authority (SAMSA) and the Department of Environmental Affairs (DEA) relating to an oil spill, the organisation that is to come into effect and the actions required of Local Authorities and other organisations (collectively referred to as Local Authorities for the purpose of this plan) to combat the impact of oil pollution on the shoreline in the event of an oil spill.

All operations will be co-ordinated by the DEA On-Scene Co-ordinator as outlined in Section 8 of this Plan.

2. OBJECTIVE

The primary objective of this Oil Spill Contingency Plan is to minimise loss of time and hence, environmental damage, in carrying out the appropriate remedial action. This is to be achieved by clearly stating the functions and responsibilities of the various authorities involved, the infrastructure to be set up, and the response required by such authorities for the duration of the incident.

3. INTERFACE WITH OTHER PLANS

South Africa's national oil spill preparedness and response strategy is guided by a suite of oil spill contingency plans; each dealing with a particular aspect of the spill situation. Although each plan is a stand alone document, it should be read in conjunction with the others, in order to ensure a co-ordinated approach. For the Amathole Zone, the following Plans are applicable:

a. **"South Africa's National Contingency Plan for the Prevention and Combating of Pollution from Ships and Offshore Installations"**
This "National Plan" is an overall plan, setting out the policies of the Department of Environmental Affairs and SAMSA, for the Department of Transport, towards their responsibilities for preventing and combating pollution of the sea by oil. It provides an overview of the actions to be taken by SAMSA, DEA and other relevant Authorities in preparation for, and in the event or the threat of an oil spill, and outlines the formation of a Joint Response Committee.

b. **The "Coastal Oil Spill Contingency Plans"** detail the actions to be taken when there is a threat of oil impacting the shoreline or an impact has occurred. The coastline from the Orange River mouth to the Mozambique border is divided into a number of zones, each of which has its own specific Local Coastal Plan. The **Amathole Zone Plan** is one such Plan and covers the area from the Great Fish River to the Great Kei River. The adjacent areas are covered by the Dias Zone and Transkei Zone Plans.

c. **The TNPA Oil Spill Contingency Plan for the Port of East London.** This plan outlines the response required by TNPA for Tier 1 (minor) oil spills within the Port and their role during Tier 2 and Tier 3 oil spills.

d. **The "SANCCOB Contingency Plan for the Capture, Transport, Rehabilitation and Release of Oiled Seabirds Following a Major Oil Spill off the South African Coast."** This Plan covers all incidents where seabirds are oiled along the South African coastline and adjacent islands, but excludes the KwaZulu Natal coast (where stabilisation is undertaken by CROW etc). However, if requested, SANCCOB will assist with birds from both Namibia and KwaZulu Natal. In the Eastern Cape, the SANCCOB Plan will operate in concurrence with SAMREC and PEC.

e. **Local Authority Disaster Management Plans** for the Buffalo City Municipality and the Amathole District Municipality which are linked to the Provincial and National Disaster Management Plans.

f. **Plans for Independent Installations** which detail the response actions that are to be undertaken in the event of oil spills at or near specific installations. These installations include offshore oil tanker discharge facilities, oil exploration and exploitation sites, power stations etc.

The inter-relationship between all the Plans in the Amathole Zone is illustrated in the diagram below. (See Fig. 1.)

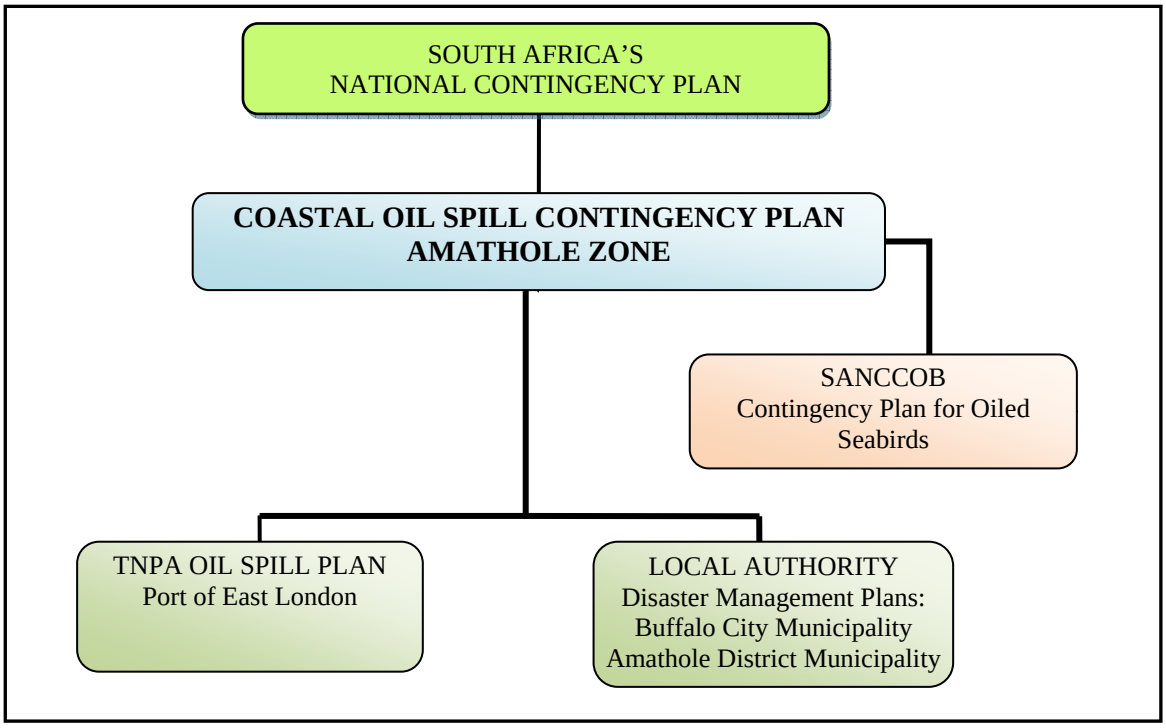


Figure 1: Inter-relationship between all the Oil Spill Contingency Plans in the Amathole Zone.

4. ACTS AND AGREEMENTS RELATING TO THE COMBATING OF OIL POLLUTION

International and national legislation, relevant to combating and dealing with oil spills, is summarised below.

4.1 INTERNATIONAL CONVENTIONS (and related South African Legislation)

Below, are the main international conventions to which South Africa is a Party. For ease of reference, the conventions have been grouped according to the areas to which they are most relevant, namely, oil pollution, operational requirements in respect of oil pollution and compensation for oil pollution damage. Where applicable, the domestic legislation giving effect to the convention is provided.

4.1.1 Oil Pollution

United Nations Convention on Law of the Sea (UNCLOS)

UNCLOS is among the conventions ratified by South Africa. UNCLOS imposes a general obligation on states to protect and preserve the marine environment. It further provides that states shall take all measures to prevent, reduce and control pollution of the marine environment from any source, using for this purpose the best practicable means at their disposal and in accordance with their capabilities.

States, acting through the competent international organisation or general diplomatic conference are required to establish international rules and standards to prevent, reduce and control pollution of the marine environment from vessels and promote the adoption of routeing systems designed to minimise the threat of accidents which might cause pollution of the marine environment, including the coastline, and pollution damage to the related interests of coastal states. Such rules and standards are required to be re-examined from time to time as necessary.

4.1.2 Compensation for Oil Pollution Damage

International Convention on Civil Liability for Oil Pollution Damage, 1992 (CLC)

This convention (originally adopted in 1969) aims to ensure that adequate compensation is available to persons exposed to oil pollution damage resulting from maritime casualties involving oil-carrying ships. It applies exclusively to pollution damage caused in the territory, including the territorial sea, of a contracting state and the exclusive economic zone of a contracting state.

It governs the liability of ship owners for oil pollution damage by laying down the principle of strict liability. The onus is on the owner to prove in each case that any of the exceptions should operate.

It also creates a system of compulsory liability insurance. Ships covered by the convention are required to maintain insurance or other financial security in sums equivalent to the owner's total liability for one incident. The ship owner is normally entitled to limit his liability to an amount which is linked to the tonnage of his ship, as stipulated in the Convention.

The convention applies to all sea going vessels actually carrying oil in bulk as cargo but only ships carrying
more than two thousand tons of oil are required to maintain insurance in respect of oil pollution damage. An owner shall not be entitled to limit his or her liability if it is proved that the pollution damage resulted from his or her personal act or omission, committed with the intent to commit such damage, or recklessly and with knowledge that such damage would probably result. The 1992 CLC was adopted by South Africa in 2004.

Marine Pollution (Control and Civil Liability) Act, 6 of 1981
This Act provides for the protection of the marine environment from pollution by oil and other harmful substances. It goes further than the CLC in that it deals with other harmful substances whereas the CLC is limited to oil pollution damage only. The Act provides for criminal as well as civil liability following a discharge which causes pollution of the sea.

While the Act is administered by the Department of Transport, the administration of the provisions of the Act regarding the combating of pollution of the sea by oil were assigned to the then Minister of Environmental Affairs and Tourism (now Minister of Water and Environmental Affairs) with effect from 20 May 1986. Furthermore, many of the administrative functions were transferred to the South African Maritime Safety Authority (SAMSA) in 1998.

An oil spill caused negligently or intentionally falls within the definition of discharge.

The Act sets out the powers of SAMSA to take steps to prevent the pollution of the sea where a harmful substance is being or is likely to be discharged from a ship or a tanker. Such steps include requiring the master or owner of such ship or tanker to unload the harmful substance from the ship or tanker, to dispose of any harmful substance so unloaded or to move the ship or tanker to a place specified by SAMSA. Where the master or the owner of a ship or tanker is not capable of complying with such requirements or cannot reasonably be expected to comply with these, SAMSA may cause such steps to be taken. Furthermore, where any harmful substance is discharged from a ship or tanker, the authority may cause any pollution of the sea caused thereby to be removed.

The owner of any ship, tanker or off-shore installation shall be liable for any loss or damage caused in the area of the Republic by pollution resulting from the discharge of oil, the cost of any measures taken by SAMSA after an incident has occurred for the purposes of reducing loss or damage caused or any loss or damage caused by measures so taken after a discharge has occurred.

The costs referred to shall include an amount deemed by the Director-General to be sufficient to compensate the South African National Foundation for the Conservation of Coastal Birds or any similar organisation approved by the Minister for expenses incurred in treating and rehabilitating coastal birds polluted by oil that has been discharged.

International Convention on the Establishment of an International Fund for Oil Pollution Damage, 1992 (1992 Fund Convention)

This convention establishes the International Oil Pollution Compensation Fund to provide compensation for pollution damage to the extent that the protection afforded by the 1992 CLC is inadequate. It applies exclusively to pollution damage caused in the territory, including the territorial sea of a contracting state and the exclusive economic zone of a contracting state.

South Africa acceded to the 1992 Fund Protocol which amended the 1972 Convention on the Establishment of an International Fund for Compensation for Oil Pollution Damage and is accordingly 1 of 103 states for which the 1992 Fund Convention is in force. This Convention has not yet been brought into effect locally. This means that, in monetary terms, South African claimants would be able to recover no more than R 196 million under the present legislation. Once the enabling legislation is passed, a combined total recoverable amount under the two Conventions (CLC and the Fund) would be approximately R 2,85 billion. Therefore it is essential that enabling legislation be passed as soon as possible.

4.1.3 Operational Requirements

The International Convention for the Prevention of Pollution from Ships, 1973, as modified by the Protocol of 1978 relating thereto (MARPOL)

South Africa is a signatory to the MARPOL convention which is the main international convention concerning the prevention of pollution of the marine environment from ships by operational or accidental causes. The Convention includes regulations aimed at preventing and minimising pollution from ships and contains 6 technical annexes which set out detailed rules and standards.

Annexure 1 contains regulations for the prevention of pollution by oil and is mandatory for state parties. The discharge into the sea of oil or oily mixtures is prohibited except when certain conditions are satisfied. The Marine Pollution (Prevention of Pollution from Ships) Act 2 of 1986 (discussed below) incorporates the convention and annexure 1 into South African domestic law.

Marine Pollution (Prevention of Pollution from Ships) Act, 2 of 1986 (the MARPOL Act)

The MARPOL Act gives effect to the MARPOL Convention, by providing for the protection of the sea from pollution by oil and other harmful substances discharged from ships. This Act is administered by the Department of Transport.

The Act provides for the Minister to make regulations to give effect to the provisions of the Convention. However this also extends to the Minister making regulations to exempt certain classes of ships from the provisions of the Convention thereby resulting in South Africa not being entirely restricted by the provisions of the Convention.

International Convention on Oil Pollution Preparedness, Response and Cooperation, 1990 (OPRC Convention)

The OPRC Convention is designed to facilitate international cooperation and mutual assistance in preparing for and responding to major oil pollution incidents and to encourage states to develop and maintain an adequate capability to deal with oil pollution emergencies.

Ships flying the flags of contracting states are required to have on board a shipboard oil pollution emergency plan. Operators of offshore units, authorities or operators in charge of sea ports and oil handling facilities must have oil pollution emergency plans or similar arrangements which are coordinated with the national system for responding promptly and effectively to oil pollution incidents.

Ships are required to comply with the oil pollution reporting procedures and the details of the actions to be taken in this regard are set out in the Convention.

The Convention makes provision for parties to cooperate and provide advisory services, technical support and equipment for the purpose of responding to an oil pollution incident and provision is made for the reimbursement of any assistance provided. South Africa has signed this convention, but has not yet brought it into effect locally.

4.2 NATIONAL LEGISLATION (other than that associated with international conventions)

Constitution of the Republic of South Africa Act, 1996

Section 24 of the Constitution states that everyone has a right to an environment that is not harmful to their health or well-being and to have the environment protected for the benefit of present and future generations through reasonable legislative and other measures that

(i) prevent pollution and ecological degradation;
(ii) promote conservation; and
(iii) secure ecologically sustainable development and use of natural resources while promoting justifiable economic and social development.

The argument may be made that in order to give effect to this right, especially as it relates to preventing pollution of the marine environment, reasonable measures must be taken to combat oil spills as well as measures to remedy the effects of spills.

National Environmental Management Act, 107 of 1998 (NEMA)

NEMA is administered by the Department of Environmental Affairs and provides for cooperative environmental governance by establishing principles for decision-making on matters affecting the environment.

One of the most important principles relevant to the oil spill contingency plan is that the costs of remedying pollution, environmental degradation and consequent adverse health effects, and controlling further pollution, environmental damage or adverse health effects must be paid for by those persons responsible for harming the environment.

Section 30 of NEMA is relevant to oil spills as it deals with the control of emergency incidents. An emergency incident is an unexpected sudden occurrence leading to serious danger to the public or potentially serious pollution of or detriment to the environment, whether immediate or delayed.

The responsible person must as soon as reasonably practicable after knowledge of the incident, take all reasonable measures to contain and minimize the effects of the incident, undertake clean up procedures, remedy the effects of the incident and assess the immediate and long term effects of the incident on the environment and public health. A relevant authority (which includes a municipality, a provincial head of department, the Director-General or any other Director-General of a national department) may direct the responsible person to undertake specific measures within a specific time to fulfill his or her obligations in terms of this section.

Should the responsible person fail to comply or inadequately comply with a directive, the relevant authority may take the measures it considers necessary to contain and minimize the effects of the incident, undertake clean-up procedures and remedy the effects of the incident. The relevant authority may claim reimbursement of all reasonable costs incurred in the taking of such measures from every responsible person jointly and severally.

NEMA provides for a Duty of Care that requires reasonable measures to be taken for the prevention of pollution or environmental degradation. This is particularly relevant in dealing with responsibility for oil spill damage. The National Environmental Management: Integrated Coastal Management Act reaffirms this Duty of Care insofar as it relates to the coastal environment. The National Water Act, 36 of 1998 also imposes a similar Duty of Care. Below, we explain the Duty of Care provisions from these acts.

Section 28 of NEMA provides that every person who causes, has caused or may cause significant pollution or degradation of the environment must take reasonable measures to prevent such pollution or degradation from continuing or in so far as such harm to the environment is authorised by law or cannot be reasonably avoided or stopped, to minimize and rectify such pollution or degradation of the environment.

The steps required by this section include the taking of measures to control any activity causing the pollution, preventing the movement of pollutants, eliminating any source of the pollution or remedying the effects of the pollution.

Where a responsible person fails to take the required measures, the Director-General or a provincial head of department may direct the responsible person to commence taking specific reasonable measures before a

given date and to complete them before a specified reasonable date. If the responsible person fails to comply or inadequately complies with such a directive, the Director-General or provincial head of department responsible for Environmental Affairs may take reasonable measures to remedy the situation or apply to a competent court for appropriate relief. The Director-General or provincial head of department may recover the costs for reasonable remedial measures to be undertaken before such measures are taken and all costs incurred as a result of applying to court for appropriate relief.

Any person may after giving the Director-General or provincial head of department thirty days notice, apply to a competent court for an order directing the Director-General or any provincial head of department to take specific measures for the protection of the environment if the Director-General or provincial head of department fails to inform such person in writing that he or she has directed the person to take such steps.

National Water Act, 36 of 1998

The National Water Act deals with pollution of water resources and also provides for the control of ***emergency incidents***. Following an emergency incident such as an accident involving the spilling of a harmful substance that finds or may find its way into a water resource (water resource is defined to include a watercourse, surface water, estuary or aquifer), the responsibility for remedying the situation rests with the person responsible for the incident or the substance involved.

Measures to be taken by such person include taking all reasonable measures to contain and minimise the effects of the incident, undertaking clean-up procedures and remedying the effects of the incident. Where such person fails to act, the relevant catchment management agency may take the necessary steps and recover the costs from every responsible person. The Act is administered by the Department of Water Affairs.

The National Water Act also provides a duty of care similar to that in NEMA. This however deals more specifically with situations where pollution of a water resource occurs as a result of activities on land.

National Environmental Management: Integrated Coastal Management Act, 24 of 2008

Included among the aims of the Act is the control of dumping at sea and pollution in the coastal zone. The Act provides that in fulfilling the rights contained in section 24 of the Constitution, the state through its functionaries and institutions implementing the Act, must act as a trustee of the coastal zone and must in implementing the Act take reasonable measures to achieve the progressive realisation of those rights in the interest of every person.

The state in its capacity as the public trustee of all coastal public property must take whatever reasonable legislative and other measures it considers necessary to conserve and protect coastal public property for the benefit of present and future generations.

The Minister, an MEC or a municipality concerned may institute legal proceedings or take other appropriate measures to prevent damage or recover damages for harm suffered to coastal public property or the coastal environment or to abate nuisances affecting the right of the public in its use and enjoyment of coastal public property. Accordingly, these provisions can extend to damage caused or measures taken to prevent such damage as a result of oil spills.

This Act also provides that section 28 of NEMA applies to any impact caused by any person that has an adverse effect on the coastal environment. The persons to whom section 28 of NEMA apply include any person who produced or discharged a substance which caused, is causing or likely to cause an adverse effect and this may therefore include discharges from ships.

South African Maritime Safety Authority Act, 5 of 1998
This Act provides for the establishment of SAMSA whose objectives are to ensure the safety of life and property at sea, to prevent and combat pollution of the marine environment by ships and to promote the Republic's maritime interests.

SAMSA may perform a function itself, in co-operating with another person or by delegating or assigning the power or duty concerned to another person. "Person" includes the state, a province, the government or an agency of the government of a foreign country or any juristic or natural person.

Certain functions of SAMSA are performed by the Department of Environmental Affairs. The responsibility for matters relating to the combating of pollution mentioned in Marine Notice No. 2 of 1996 issued by the Department of Transport on 24 January 1996 is regarded as having been assigned to the Department Environmental Affairs by this Act.

The National Health Act, 61 of 2003 (Replaces the Health Act, 63 of 1977)
The National Health Act provides that every local authority shall take all lawful, necessary and reasonably practicable measures to prevent the occurrence, within its district, of any condition which could be harmful or dangerous to the health of any person within its district or the district of any other local authority. Where such nuisance or condition has occurred, the authority must take measures to abate or remedy such condition. Accordingly where an oil spill could be harmful or dangerous to human health, the local authority may take measures to remedy its effects.

The Sea-Shore Act, 21 of 1935
The Sea-Shore Act makes specific provision for the protection of public health. The competent authority to whom the administration of the Health Act has been assigned, may declare that any local authority may exercise, in respect of the sea-shore and the sea situated within its area of jurisdiction or adjoining such area, any of the powers which are conferred by the Health Act on a local authority. This could therefore be extended to include the taking of measures to remedy an oil spill in cases where it could be harmful to human health.

The Minister of Transport may, in terms of this Act, make regulations or authorise any local authority to make regulations concerning the prevention or the regulation of the depositing or the discharging upon the sea-shore or in the sea of offal, rubbish or anything liable to be a nuisance or danger to health.

The Act will be repealed by section 98 of the National Environmental Management: Integrated Coastal Management Act when that section comes into force.

Other Relevant Legislation

The following legislation while not directly applicable in dealing with measures to be taken in cases of oil spills is still of relevance for purposes of the protection of the marine environment from oil spills.

Merchant Shipping Act, 57 of 1951
SAMSA is responsible for the administration of this Act. The Act imposes an obligation on an owner of a ship to secure the sea worthiness of a ship. Unseaworthy ships may be detained and where any ship is detained, it may be inspected by a surveyor who shall report on any supposed defects or deficiencies.

Dumping at Sea Control Act, 73 of 1980
This Act brings into force domestically the provisions of the Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter, 1972 (the London Convention). It provides for the control of dumping at sea of various substances and structures, including vessels, platforms or other man-made structures.

South Africa is a signatory to the 1996 Protocol, which will eventually replace the current Convention. The Protocol introduces the precautionary and polluter pays principles and expands the objectives of the Convention to include the elimination of pollution where practicable.

The Act is administered by Department of Environmental Affairs. It will however be repealed by section 98 of the National Environmental Management: Integrated Coastal Management Act when that section comes into force.

Marine Pollution (Intervention) Act 64, of 1987:
This Act gives domestic effect to both the Intervention Convention Relating to the Intervention on the High Seas in Cases of Oil Pollution Casualties, 1969 as well as the Protocol Relating to Intervention on the High Seas in Cases of Marine Pollution by Substances other than Oil, 1973. It allows the Minister of Transport to make regulations to give effect to the provisions of the Convention and the Protocol.

Disaster Management Act, 57 of 2002
This Act provides for, among others, an integrated and co-ordinated disaster management policy that focuses on preventing or reducing the risks of disasters, mitigating the severity of disasters, emergency preparedness, rapid and effective response to disasters and post-disaster recovery.

Disaster is defined in section 1 of the Act as "Is of a magnitude that exceeds the ability of those affected by the disaster to cope with its effects using only their own resources" and could presumably include oil spills. The Act not only addresses the occurrence of a disaster, but also makes provision for the "threat of" a disaster, i.e. potential disaster.

The Act does not however apply to a disaster where such occurrence can be dealt with effectively in terms of other national legislation aimed at reducing the risk, and addressing the consequences of occurrences of that nature and identified by the Minister by notice in the Gazette. Accordingly, this Act would not be of direct application in cases of oil spills as the other Acts related to oil pollution response, provide measures that can be enforced in dealing with oil spills.

The Public Finance Management Act, 1 of 1999

This Act regulates financial management in the national government and provincial governments and ensures that all revenue, expenditure, assets and liabilities of these governments are managed efficiently and effectively. It provides for the establishment of a national treasury consisting of the Minister who is the head of treasury and the national department or departments responsible for financial and fiscal matters.

While the Act is not directly relevant to procedures in the event of oil spills, the Minister or MEC for finance in a province may authorize the use of funds from the respective national revenue fund or provinces provincial revenue fund respectively to defray expenditure of an exceptional nature which is not currently provided for and which cannot, without serious prejudice to the public interests be postponed to a future appropriation of funds. Thus in particular circumstances additional budget could possibly be allocated in cases of oil spills that threaten the public interests.

Municipal Finance Management Act, 56 of 2003

All expenditure by municipalities is regulated by this Act.

National Ports Act, 12 of 2005

This Act relates to the establishment of the National Ports Authority and the Ports Regulator; to provide for the administration of certain ports by the National Ports Authority; and to provide for matters connected therewith. The Authority is required in the performance of its functions to ensure that a fair and reasonable balance is achieved between the protection of the environment and the establishment, development and maintenance of ports.

4.3 RESPONSIBLE AUTHORITIES

4.3.1 South African Maritime Safety Authority (SAMSA)

SAMSA was established on 1 April 1998 in terms of the South African Maritime Safety Authority Act, 5 of 1998 and it is accountable to the Minister of Transport. Its mission is to promote South Africa's maritime interests and development and position the country as an international maritime centre while ensuring maritime safety, health and environmental protection.

The responsibility for matters relating to the combating of pollution however, mentioned in Marine Notice no. 2 of 1996 issued by the Department of Transport on 24 January 1996, is regarded as having been assigned to the Department of Environmental Affairs by the Act.

Included among the services provided by SAMSA are accident investigations and emergency casualty response, management of the Department of Transport contracted pollution prevention and response capability, statutory surveys and safety certification of ships, inspections of ships and cargos of hazardous goods, casualty investigation and management, oil pollution incident response and investigation, and providing a maritime search and rescue capability in the South African area of responsibility through the management, on behalf of the Department of Transport, of the Maritime Rescue Coordination Centre.

The South African Maritime Safety Authority Act establishes SAMSA as a juristic person. It may perform its functions both within and outside the Republic and it may do so by itself, in cooperation with another person or by delegating or assigning a power or duty concerned to another person (including the state, a province, the government or an agency of the government of a foreign country or a juristic or natural person). SAMSA also has the power to institute and conduct civil proceedings in all matters relating to its functions.

4.3.2 Transnet National Ports Authority (TNPA)

The main functions of the TNPA are to own, manage, control and administer ports to ensure their efficient and economic functioning. This includes regulating and controlling pollution and the protection of the environment within the port limits.

The TNPA may give notice to the owner or other person legally responsible for the upkeep of any vessel within port limits to remove or otherwise dispose of such vessel, or part thereof, which is not seaworthy or is likely to become an obstruction, wreck or derelict or a threat to the environment or public safety. It may also recover from that owner or person all costs incurred for the removal or disposal should he or she fail to comply with such notice within the time specified therein.

The Harbour Master is, in respect of the port for which he or she is appointed, the final authority in respect of all matters relating to the movement of vessels within port limits. Accordingly the Harbour Master may give such written or verbal instructions for the detention of a vessel reasonably suspected of causing oil pollution in the port area and ensuring that the total cost of the pollution clean–up operation is recovered, or acceptable guarantees are provided, prior to the vessel being giving permission to leave the port.

The TNPA may with the approval of the Minister of Transport make rules for the control and management of ports and for the maintenance of safety, security and good order in ports, in particular regarding the protection of the environment within ports, the cleaning of land and waters of the ports and the prevention of oil, filth, rubbish or any other matter from being thrown into the sea.

Port Rules

The TNPA has developed Port Rules in terms of the National Ports Act, which came into effect on 6 March 2009. Chapter 4 of the port rules deals with the protection of the environment and provides that all persons within a port must take all reasonable steps to prevent, minimize and mitigate pollution or degradation of the environment.

Any person who pollutes or causes damage to the environment will bear the costs associated with the combating and cleaning up of that pollution, damage or degradation and the associated impacts relating thereto.

Furthermore, no oil may be discharged or dumped from a vessel or be allowed to escape from a vessel into any part of the port. The clean up of pollutants, including oil, which is spilled within port limits must be dealt with in accordance with the applicable Port Contingency Plan.

4.3.3 Department of Environmental Affairs

The Marine and Coastal Pollution Management section of the Department of Environmental Affairs is responsible for, among others, combating pollution incidents, and cleaning up of spills. The Department may also issue directives in terms of the NEMA requiring pollution and degradation to be remedied including the undertaking of clean-up procedures.

In terms of the Policy on the Use of Oil Spill Dispersants in South African Waters, the decision to use oil spill dispersants should only be taken by the Department Environmental Affairs. In the event of a spill incident, the Department's On-Scene Co-ordinator, in consultation with the scientific advisors, should only decide to use oil spill dispersants if such use will minimize the overall environmental impact.

Oceans and Coast (O&C) is one of the four branches of the Department and it is a regulatory authority responsible for managing all marine and coastal activities. O&C has invested in the development of an oil spill response capability. This allows equipment and man-power to be mobilised at short notice to protect beaches, estuaries, bird colonies and other sensitive areas.

Provincial Departments of Environmental Affairs, such as DEDEA (Eastern Cape) and DEA&DP (Western Cape), have concurrent powers with the DEA in terms of environmental responsibilities.

4.3.4 Municipalities

Municipalities also have an important role to play in dealing with oil spills. There exist provisions in South African law that can be invoked to enable municipalities to take appropriate measures in dealing with oil spills.

In terms of the provisions of NEMA dealing with emergency incidents, a relevant authority, which includes a municipality, may direct that specific measures be taken. Where the responsible person fails to comply or inadequately complies with a directive or there is an immediate risk of serious danger to the public or potentially serious detriment to the environment, the municipality may take the measures it considers necessary and claim reimbursement of its reasonable costs incurred from the responsible persons. Such measures would include undertaking clean-up procedures and remedying the effects of the incident.

The National Environmental Management: Integrated Coastal Management Act makes provision for a municipality to institute legal proceedings or take other appropriate measures to prevent damage suffered to coastal public property or the coastal environment. The Health Act also requires local authorities to take measures to prevent the occurrence of any condition which could be harmful or dangerous to the health of any person.

A municipality may also be directed to take specified measures to prevent or remedy adverse effects on the coastal environment in terms of the National Environmental Management: Integrated Coastal Management Act. Where the MEC is satisfied that the municipality is not taking adequate measures, he or she may in writing direct a municipality to take specified measures. Where the municipality does not comply with this directive, the MEC may take measures to prevent or remedy the adverse effects.

4.3.5 South African National Parks (SANParks)

The National Environmental Management: Protected Areas Act, 57 of 2003 provides for the continued existence of SANParks which was established by the National Parks Act, 57 of 1976. SANParks manages all existing national parks as well as various types of protected areas including marine protected areas assigned to it by the Minister. Included among SANParks's functions is to protect, conserve and control the national parks and other protected areas assigned to it, including their biological diversity. SANParks functions would be relevant in relation to oil spills insofar as they relate to marine protected areas.

4.3.6 Provincial Nature Reserves

Provincial Nature Reserves are managed in accordance with Provincial Ordinances, as well as the National Legislation listed above. Their functions are to protect, conserve and control the protected areas, especially in terms of biological diversity.

5. FINANCIAL ARRANGEMENTS AND COMPENSATION OF COSTS

South Africa's National Contingency Plan for Prevention and Combating of Pollution from Ships states: "Any response arising from a shipping casualty, whether an intervention of sorts, or an actual clean up exercise, can be very costly and the Republic has no dedicated state pollution contingency fund in place. Initially the costs of such operations fall to those involved in the operations and in line with the "polluter pays" principle may subsequently be claimed as costs and damages from the owner. It is however accepted that small service providers cannot be expected to carry the costs of providing services to the state for any (length of) time and SAMSA, as the responsible authority will assist in enabling a response to get under way, by way of underwriting such actions as it considers necessary in the early phases of any response. This undertaking is severely limited and a better arrangement regarding underwriting the costs will have to be made in the event."

If response operations, as covered by this Plan, are centrally co-ordinated, professionally carried out, cost-efficient and effective, well documented and fully integrated with overall response activities, they have a good chance, in principle, to qualify for compensation of costs incurred. Close liaison with insurers, through SAMSA and DEA, from the start of the response operation is essential. So it is imperative that local authorities participate in the discussions of the Joint Response Committee (JRC) which is chaired by SAMSA during a major shipping incident.

South Africa has acceded to the CLC92 and Fund 1992 Conventions, and through SAMSA has access to claiming protocols of up to approximately R 2.85 billion once enabling legislation is passed. Until then the limit is set at approximately R196 million.

Identifiable Source

In many cases the source of the spill will be identified and the vessel will have P&I Club (3rd Party) insurance cover. This will make the recovery of costs and damages a strong probability, especially if the claims are reasonable and any expenditure has been properly audited and controlled. In the event of the source of oil pollution being identified, the Minister of Transport may require the owners/insurers to establish a fund from which claims can be paid. As soon as possible, DEA should provide SAMSA with an estimation of costs for protection and clean-up operations so that this can be included in the guarantee. Local Authorities should inform DEA of any major costs at the outset and they should be kept updated on costs as they are incurred. It is important to bear in mind the limitation of liability regime that is in place in South Africa. This means that the sum total of costs may therefore not be met in full.

It is quite possible however that there might be no response from the owner and any interventions and clean-ups must be carried out nevertheless. These actions need to be tempered, however, with the reality that these costs may not be recoverable from the owner and that the state would need to be approached for compensation. SAMSA will make every effort to secure assets or funds associated with the owner in cases such as this in order to mitigate the cost to the state.

Source not identified

If the source of the oil spill is not identified, the cost of clean-up may have to be borne by the State, and SAMSA will approach Treasury for an advance of funds. However, if it can be proved that the oil is a crude oil then compensation can be sought through IOPC. It would therefore be necessary for samples of the oil, or oily sand to be collected for analysis. DEA/SAMSA is responsible for undertaking the oil finger printing analysis. The number of samples taken will depend on the extent of the spill and the requirements of the insurers. A guide on the collecting and storing of samples is provided in Addendum E.

5.1 POLICY ON PURCHASING

In normal circumstances prior approval of the Department of Environmental Affairs is required for the purchase or hire of anything by Local Authorities for which recompense is to be sought. However, in the interests of continuity of an operation where the resources of Local Authorities are insufficient to prevent or remove oil pollution, the Area Controllers (see Section 8.4.2) may, within reasonable limits, purchase or hire additional equipment, purchase consumable materials, employ additional labour or engage the services of contractors without such prior approval, but are to advise the DEA Shore Controller or the JRC immediately of such acquisitions. The purchase of capital equipment may, however, only be undertaken after approval through the JRC.

NOTE:
The attention of the Area Controller is drawn to the terms of Sections 5(5) and 5(6) of Act 6 of 1981, entitling the Minister of Transport to enquire into the reasonableness of costs incurred and claims made.

5.2 CLAIMS

The Claims Manual produced by IOPC (April 2005) provides specific information on claiming procedures. The main points are summarised below.

5.2.1 Loss or Damage

All claims for loss or damage shall be submitted to the DEA On-Scene Co-ordinator, who will take the necessary steps to establish that the claim is adequately substantiated and reasonable. Once the details of each claim have been verified, it will be forwarded to the SAMSA Administration Officer for processing.

These claims could include loss or damage to property, grazing lands, livestock, fishing nets, loss of livelihood etc., in the area of the Republic, resulting from the discharge of oil from a ship, tanker or offshore installation and also damage or loss caused by methods used to clean up polluted areas. All claims made must be submitted according to the requirements listed in Appendix I, where an expenditure log sheet template is also provided.

Depending on the nature of the claim, the following information may be required:

- Nature of loss, including evidence that the alleged loss resulted from the contamination.
- Monthly breakdown of income for the period of the loss and over the previous three years.
- Where possible, monthly breakdown of units (eg kilograms of fish caught and sold or number of hotel rooms let etc) for the period of the loss and over the previous three years.
- Saved overheads or other normal variable expenses.
- Method of calculation of loss.

5.2.2 Measures Taken

Claims for costs of measures taken in respect of protection from, and clean-up of oil pollution are to be submitted to the DEA On-Scene Co-ordinator and are to be fully substantiated by detailed time sheets for labour and machinery, and invoices for material and equipment purchased. Justification for the action taken must be included. It is essential that costs are well documented and that stringent records of expenditure are maintained. Claims should answer the questions: **Who? What? Where? When? and Why?** A brief summary report outlining the nature of the incident and the associated activities should be provided with the claims.

The following information should be provided:

- Delineation of area affected, describing the extent of the pollution and identifying those areas most heavily contaminated (maps, charts, photographs and video tapes).
- Analytical or other evidence linking the oil pollution with the ship (chemical analysis, relevant wind, tide and current data, observation and plotting of oil movement).
- Summary of events, including description and justification of work carried out at sea, in coastal waters and on shore, together with an explanation of why the various methods were selected.
- Dates on which work was carried out at each site.
- Labour costs at each site (number and categories of response personnel, name of employer, hours or days worked, regular or overtime rates, and other costs).
- Travel, accommodation and living costs for response personnel.
- Equipment costs at each site (types of equipment used, by whom supplied, rate of hire or cost of purchase, method of calculation of hire rates, quantity used, period of use).
- Cost of replacing damaged equipment beyond reasonable repair (type and age of equipment, original purchase price, and circumstances of damage, supported by photographs etc).
- Consumable materials (description, by whom supplied, quantity, unit cost and where used).
- Any remaining value at the end of the operations, of equipment and materials purchased specifically for the incident.
- Transport costs (number and types of vehicles, vessels or aircraft, number of hours or days operated, rate of hire or operating cost, method of calculating rates).
- Cost of temporary storage and of final disposal of recovered oil and oily material, including quantities disposed, unit cost and method of calculating the claimed rate.

5.2.3 Claims for environmental reinstatement measures and post spill studies.

In some instances it is possible to enhance the speed of natural recovery after a spill, through reasonable re-instatement measures. The cost of such measures may be accepted for compensation by the IOPC under certain conditions.

Such measures should:

- accelerate significantly the natural process of recovery;
- seek to prevent further damage as a result of the incident;
- not result in degradation of other habitats or adversely affect other natural or economic resources;
- be technically feasible;
- not result in costs being out of proportion to the extent and duration of the damage and the benefits likely to be achieved.

The IOPC Fund may contribute to the cost of studies to determine the nature and extent of environmental damage caused by an oil spill or to determine whether reinstatement measures are necessary. Usually this would be appropriate for major incidents only, and if the studies are likely to provide reliable and useful information. Strict conditions apply; the IOPC should be consulted at an early stage, and a scientific committee should be established to co-ordinate such studies.

5.2.4 Checklist for oil spill claims procedure

Item	Responsibility	Check
Identification of vessel owner/insurer	SAMSA	
Determine level and details of insurance	SAMSA	
Analysis of spilled oil. Crude oil / bunker oil?	SAMSA, DEA	
Owner/Insurer guarantee secured	SAMSA	
SA Treasury funding request (if no insurance cover)	SAMSA/DEA	
Owner/Insurer requested to attend JRC	SAMSA	
Response activities agreed at JRC	SAMSA, DEA, Owner/Insurer, Stakeholders (local authorities)	
Record of decision signed (template in Appendix V)	SAMSA, DEA (Insurer can be asked to sign, but not essential)	
Keep strict records of all activities undertaken. "Who? What? Where? When? Why?" (see Appendix I)	Each Claimant: SAMSA, DEA, Stakeholders (local authorities and individuals)	
Maintain file of all invoices and receipts	Each Claimant: SAMSA, DEA, Stakeholders (local authorities and individuals)	
Compile summary claim report	All Claimants: SAMSA, DEA, Stakeholders (local authorities and individuals)	
Submit claim to DEA for verification (to include summary report, record of activities and copies of invoices and receipts)	All claimants: Stakeholders (local authorities and individuals)	
Verification of all local authority and individual claims	DEA	
Compilation of summary claim report for environmental response.	DEA	
Approved claims submitted to SAMSA	DEA	
Claims submitted to Owner/Insurer or Treasury	SAMSA	
Negotiations and discussions of claims with Owner/Insurer or Treasury	SAMSA, DEA, Owner/Insurer, Treasury	
Payment of claims	Owner/Insurer, Treasury	

6. PREPARATORY ACTIVITIES

6.1 DEPARTMENT OF ENVIRONMENTAL AFFAIRS

The Deputy Director: Marine and Coastal Pollution Management and his delegated Marine Pollution Officers, marked with an (*) in Section 7.1.3, are responsible for the preparation, improvement and updating of the Local Coastal Plans on an ongoing basis. In addition, they must ensure that the departmental organisation is maintained at a sufficient state of readiness to cope with an incident, and also be available to assist the Local Authorities with training activities when so required. Concurrent powers are held by the Provincial Departments of Environmental Affairs.

6.2 MUNICIPALITIES / LOCAL AUTHORITIES

The Local Authorities in this area have nominated the Environmental Manager, Amathole District Municipality, to act as the Local Authority Co-ordinator, during an oil spill incident in this area (see Section 8.4.1 for job description). In addition to his/her duties during a spill, this officer will be responsible on an ongoing basis for ensuring that the Local Authorities in this Zone are fully prepared to respond to an oil spill incident. He/she therefore has to be fully conversant with this plan, and must ensure that information regarding equipment and material, telephone numbers etc, is kept up to date. His contacts within the Department of Environmental Affairs are the Marine Pollution Officers in Cape Town.

For each of the protection measures set out in Section 10, the relevant Local Authority must compile a plan detailing how the task can be completed in the shortest possible time. The authorisation for the release and allocation of emergency funds is an important factor to be considered during the planning process. Detailed plans are also required for clean-up operations if these are unique. The Department of Environmental Affairs (Marine Pollution Officers) will assess the viability of these proposed plans in relation to the availability, quantity and effectiveness of the materials, equipment and labour readily available, and make recommendations where necessary. The plans, once accepted, will then form part of this Coastal Oil Spill Contingency Plan.

6.3 TRAINING AND EXERCISES

The Department of Environmental Affairs is responsible for ensuring that training is undertaken by those organisations involved in carrying out this Contingency Plan. Without such training, the plan has little value. The Marine Pollution officers shall be trained to the relevant levels commensurate with their roles and responsibilities, as recommended in the table below.

Responsible officer	Role	Training
Deputy Director and Assistant Director: Marine and Coastal Pollution Management	On-Scene Co-ordinator	IMO Level 2/3 – Response to Marine Oil Spills: Course for On-Scene Commanders and Executive Commanders (having completed previous levels).
Pollution Officers	Shore Controller, Env. Liaison Officers	IMO Level 2 – Response to Marine Oil Spills: Course for On-Scene Commanders. Ability to control and put a specific contingency plan into action (having completed previous levels).
Pollution Officers, Pollution Technicians and Artisans	Logistics Officers, Beach supervisors,	IMO Level 1 – Ability to act as shoreline clean-up supervisor/beachmaster. IMO foundation level – Basic use of Tier 1 sorbents, booming and recovery techniques and understanding contingency plans.

Table showing level of training for DEA: Marine Pollution Officers

Local Authorities are required to ensure that persons appointed to the various tasks are familiar with their responsibilities, duties, powers and to whom they will be accountable during the incident. Enquiries regarding training should be addressed to the DEA (Marine Pollution Officers).

Simulated exercises are an excellent way to test the effectiveness of this Plan and train personnel in the emergency roles. In the absence of any large spill, DEA is committed to undertaking a desk-top exercise once a year to ensure that managers and responsible officers are aware of the procedures and response strategies incorporated in this Plan. Exercises will be arranged to test some or all of the following: call out procedures, contact details, equipment supply lists, setting up the response organisation and facilities, communications, media liaison and relationships with other authorities.

DEA will also commit to assist local authorities with training exercises in their respective zones. Bearing in mind that there are 25 Zones, it is prudent for DEA: Marine Pollution Officers to aim towards arranging or participating in training exercises every second year in each of the zones. These could take the form of desk-top exercises, video assisted training or clean-up/boom deployment exercises on the shoreline. By selecting one Zone and its neighbours for one trip, it may be a good idea to undertake a video training event in one Zone, a booming exercise in a neighbouring Zone and a desktop exercise in the other neighbouring Zone. By extending invitations to local authorities in all three zones, role players would have the opportunity to partake in various training events.

The proposed training exercise schedule is provided in the table below.

Time frame	Type of exercise	Participants
Every Year	Desk Top Exercise	DEA:O&C and invited partners
Year 1	Desk Top Exercise or Video Training or Beach cleanup or booming	Local authorities and associates in the following zones: West Coast, Swartland, Cape, Caledon (Overstrand); Humansdorp, Dias, Amathole, Scottburgh, Amanzimtoti, Durban and Ballito.
Year 2	Desk Top Exercise or Video Training or Beach cleanup or booming	Local authorities and associates in the following zones: Agulhas, Langeberg, Mossel Bay, Knysna, Transkei, Port Edward, Margate, Port Shepstone Pennington, Lower Tugela, Tugela, Richards Bay and St Lucia.
Every 5 years	National exercise in one of the Zones to tie in with major revision of the Contingency Plans.	DEA:O&C, SAMSA, TNPA; and relevant local authorities

Table showing schedule for proposed training exercises.

Full debriefing sessions following the exercises should be undertaken in order to highlight deficiencies, improve or update this Contingency Plan. Lessons learnt should be shared with other local authorities.

An exercise and training template is provided in Appendix III and should be completed accordingly.

7. INITIAL REPORTING AND ACTIVATION OF THE PLAN

The initial procedures during an oil spill incident are of the utmost importance, since they can determine the success or failure of the response operation. It is essential that accurate information is obtained and that key personnel are notified accordingly.

All oil spills at sea are to be reported to SAMSA and DEA Marine and Coastal Pollution Management (MCPM). Oil spills on the shoreline, or oiled penguins must be reported to DEA: MCPM, who in turn will notify SAMSA. If the coastline or seabirds are likely to be effected, MCPM will notify the Local Authorities and SANCCOB accordingly. The notification regime is illustrated in figure 2 below.

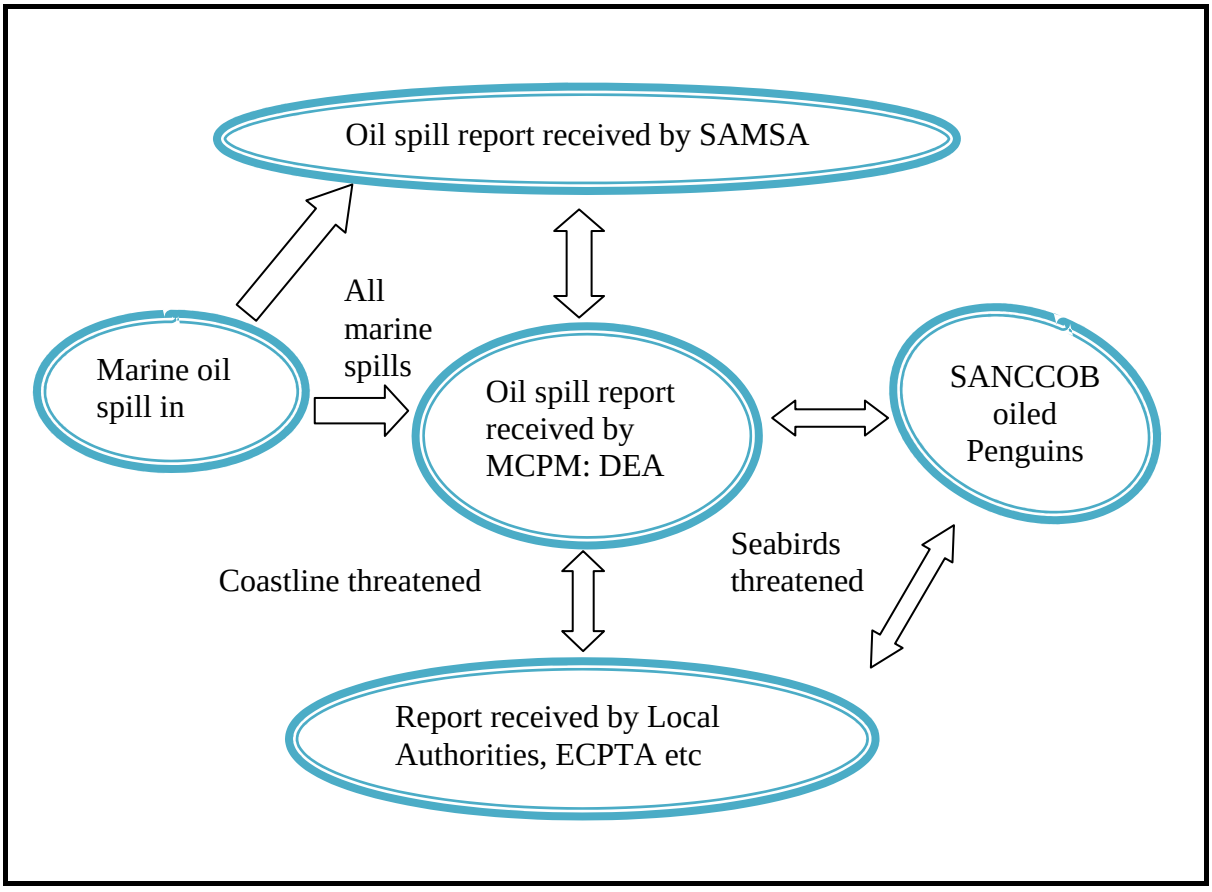


Figure 2: Requirements for initial reporting of oil spills.

7.1 REPORTING OF OIL SPILLS

The first indication of an oil spill may come either from a report from a vessel or the sighting of an oil slick at sea, or from an observation of stranding or stranded oil. Often, the first warning of an oil spill is through the observation of oiled penguins on the colonies, and subsequent reporting through island staff or SANCCOB.

7.1.1 Initial Reports by Local Authorities

Stranding or stranded oil and in some cases a sighting of oil at sea may be reported directly to Local Authorities. On receipt of such a report, the Local Authority should make an immediate investigation to obtain as much information as possible. Having assessed the validity of the report, the Local Authority is to inform the **DEA Pollution Officers** listed in Section 7.1.3. An incident report form to be used by the local authority is provided below

If contact cannot be made with any of the DEA Pollution Officers, then the Local Authority must make contact with one of the SAMSA Officers following the sequence listed. Failing this the **Amathole District Municipality's Disaster Management Control Centre** should be contacted. Alternatively contact should be made with the **Buffalo City Municipality Disaster Management Centre**.

LOCAL AUTHORITY OIL SPILL INCIDENT REPORT FORM

Date and Time of Spill, or Spill Sighting.....…….....……...……

Reported by: NAME:…..……..... TEL: .....…….

Reported to: NAME……..... TEL: .....

Officer Responding: NAME:……..... TEL: .....…..

Precise location of where oil was seen: (e.g. name of beach or geographic co-ordinates)

.....

Description of location: (e.g. sandy beach/rocky shore, amenity value, environmental sensitivity etc)

.....

Extent and nature of oiling: (e.g. length, breadth, thickness, % area covered, tar balls, fresh liquid oil, penetration into the sand, colour etc)

.....

Estimated wind speed and direction: .....

Estimated quantity of oil spill.

less that 50 litres	50 to 100 litres	100 to 1000 litres	1 to 7 tonnes	7t to 70 t	more than 70 t

Cause of spill (if known): …….....…….....

Response required: | sorbents | booms | skimmers | manpower | beach clean-up, other.....|

Comments:

7.1.2 Initial Reports by Department of Environmental Affairs

In the event of SAMSA or the Department of Environmental Affairs receiving a report from a vessel or a report of a sighting of an oil slick at sea, they will assess the probability of the shoreline being impacted by oil. If such a threat exists the Department of Environmental Affairs will endeavour to determine:

- the stretch of coastline likely to be impacted,
- the probable time of the initial impact,
- the anticipated magnitude of the impact.

In the event of a major spill, the Department of Environmental Affairs will alert the Disaster Management Centre and the Environmental Manager of the Amathole District Municipality, who in turn will alert (see Section 7.2.2) the Local Authorities who have jurisdiction over the coastline under threat of impact. The DEA Pollution Officers should follow up the notification process to ensure that all relevant local authorities have been advised. The Disaster Management Duty Officer of the Buffalo City Municipality will also be alerted, should the area under their control be threatened.

The threat situation will be under constant review and the Local Authorities will be advised of each revision, by the DEA Deputy Director: Marine and Coastal Pollution Management, or his delegated officer.

Should the Department of Environmental Affairs receive the initial report of stranded oil, it will either send one of its own officers, or, when there is no such officer in the vicinity, request the appropriate Local Authority to verify such report before proceeding further. If necessary, aerial surveillance will be initiated by the DEA OSC. The initial response actions are illustrated in the diagram below (Figure 3).

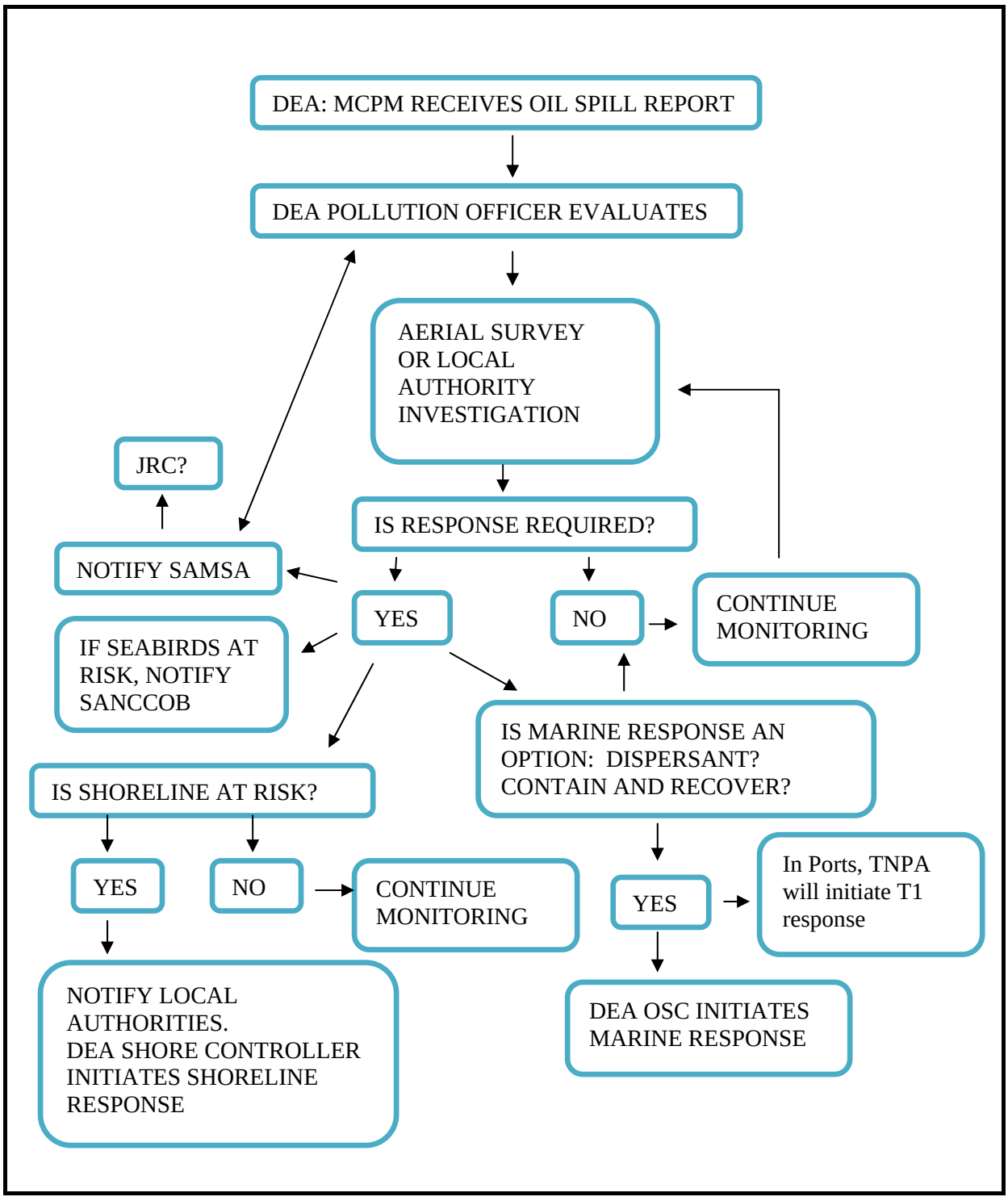


Figure 3: **Diagram illustrating initial DEA response actions.**

7.1.3 Initial Report Call Numbers

TELEPHONE LIST FOR REPORTING OIL SPILLS

Organisation	Office Tel	Fax	Cell
DEPARTMENT OF ENVIRONMENTAL AFFAIRS: MCPM			
* Marine Pollution Officers: Dr Yazeed Petersen (DD) Feroza Albertus-Stanley (AD) Marine Pollution Officer	 021 819 2450 021 819 2457	 021 819 2445 021 819 2445	 083 530 3127 072 173 6234
SAMSA			
SOUTHERN REGION Capt N. Campbell	 041 582 2138	 041 582 2130	 083 309 6053
East London Capt P Kroon (PO)	 043 722 4120	086 615 8659 043 722 2264	 082 445 3166
Port Elizabeth: Mr B Colenutt (PO)	 041 585 0051	086 616 3205 041 582 1213	 082 445 3167
Mossel Bay Mr. Dave Manley	 044 690 4201	086 616 3370 044 691 1206	 082 477 1813
WESTERN REGION Capt Dave Colly	 021 421 6170	 021 419 0730	 082 812 2997
Cape Town: Capt G Louw	 021 421 6170	021 419 0730 086 696 9074	083 227 0721
Saldanha Bay Mr. Martin Slabber	 022 714 1612	 022 714 3635	 082 789 6764
EASTERN REGION. Capt. Saroor Ali	 031 307 1501	086 616 3205 031 306 4983	 071 686 9593
Durban: Mr. Grant Conway	 031 307 1501	086 615 7055 031 306 4983	 082 449 6350
SAMSA: Maritime Rescue Co-ordination Centre MRCC 24 Hours Operation 021 938–3300 24 Hours Operation 021 938 -3309 Fax			
Mr A Botes	021 - 938 3310	086 616 4415 021 938 3319	083 254 2944
Head: Centre of Sea Watch Mr. Karl Otto	 021 938 3317	086 654 4742 021 938 3319	 082 812 2991
Duty Controller (all hours)	021 938 3300	021 938 3309	
Buffalo City Municipality: Disaster Management			
Duty Officer (all hours) Fire Service (all hours)	043 743 7118 043 705 9000	043 722 1515	
Amathole District Municipality: Disaster Management Control Centre			
Duty Officer (all hours) Fire Department	 043 831 1084		

7.2 LEVELS OF RESPONSE AND ACTIVATION

In this Plan, the combating response shall be organised according to the following levels of response as described in the National Plan and illustrated in the diagram below:

a) A **Tier 1** response is where the containment, clean-up and rescue of contaminated fauna can be dealt with within the boundaries of the vessel, berth or a small geographical area; where the incident has no impact outside the operational area but poses a potential emergency condition. Such an incident covers a small spill that can be contained and cleaned-up by the ship, terminal, port, or local authority staff using their own resources. The most common type of Tier 1 response deals with an incident occasioned during a ship bunkering operation or a small quantity of oil from an unknown source impacting the shoreline.

b) A **Tier 2** response is where the nature of the incident puts it beyond the containment, clean-up and rescue of contaminated fauna capabilities of the ship, terminal operator or the Local Authority. The containment or clean-up requires the use of some of or all the government and industry resources. It could be near or some distance from operational centres. The incident is usually associated with shipping activities in ports or harbours, coastal waters, pipelines, tank failures or near shore explorations and production operations.

c) A **Tier 3** response is where the nature of the incident puts it beyond containment, clean-up and rescue of contaminated fauna capabilities of a national or regional response. It is usually a large spill which has the probability of causing severe environmental and human health problems. The response will require assistance from outside the country. Such an incident becomes a major international affair involving a number of aspects of government. When responding to an incident of this nature, strategies outlined in the National Plan should be engaged.

The Tiered Response *(from IPIECA)*

Large spill			TIER 3
Medium spill		TIER 2	
Small spill	TIER 1		
Response required	Local	Regional/ National	National/International

In reality, spills do not fall into convenient categories. It is therefore important to be prepared to initiate at the higher tier as soon as possible, as is it easier to stand down an alerted system than to try to escalate a response at the last moment.

7.2.1 Department of Environmental Affairs Response

Once the Department of Environmental Affairs has assessed the initial report, and found it necessary to initiate a response, the organisational structure outlined in Fig. 4 (Section 8.1) will come into effect. The functions of the officers concerned are described in Section 8.2.

7.2.2 Local Authorities Response

If, during the evaluation of the spill by the Department of Environmental Affairs, it is established that there is a threat to the coastline, the Department will inform the relevant Local Authorities accordingly. The sequence of steps that will take place and activities required of Local Authority Officers are described below and in Section 8.4. Their relationship to the Department of Environmental Affairs is described in Section 8.3.

ALERT - If a threat is present, but not imminent, the Department of Environmental Affairs will request the Local Authorities to inform their key personnel (i.e. those who may be involved) who are to remain contactable. SAMSA, in consultation with DEA will decide whether it is appropriate to assemble a Joint Response Committee

MOBILISATION - As the threat draws closer, the Local Authorities will be requested to begin moving equipment, materials and labour onto site.

IMPLEMENTATION - As the impact of oil becomes imminent, the Department of Environmental Affairs will authorise the deployment of equipment, labour and materials.

If the Local Authority feels the implementation of specific protection measures cannot be delayed, authority to proceed can be obtained from the Dept. of Environmental Affairs by telephone. It must then be confirmed later by fax or email to the Dept of Environmental Affairs, quoting date, time, person contacted, and action implemented. If difficulty is encountered in contacting the Dept. of Environmental Affairs such requests may be channelled through SAMSA or the Disaster Management Centre of the Amathole District / Buffalo City Municipality.

REVIEW - Local Authorities are to review the clean-up operations continually, to ensure that the operations being carried out are cost effective. The Department of Environmental Affairs or the Joint Response Committee, will continually review the overall threat situation, re-evaluate the response decisions, and advise the Local Authorities accordingly.

TERMINATION - Once the threat has passed, the Department of Environmental Affairs will decide, through the Joint Response Committee, at what stage the clean-up operations will cease and the protective works that were installed can be removed.

8. ORGANISATION

8.1 DEA and SAMSA ORGANISATION

The DEA Oil Spill Response Organisation and its linkage to SAMSA are presented schematically in Figure 4 below. This organisation is only effective for the duration of an oil spill. Depending on the spill scenario, individual personnel will undertake each of the following functions:

- DEA On-Scene Co-ordinator
- DEA Shore Controller
- DEA Logistics Officer
- DEA Environmental Liaison Officer
- DEA Media Officer
- SAMSA Operations Manager
- SAMSA Administration Officer.

For limited spills, the functions above may be combined and undertaken by a smaller number of Departmental Officers. During a spill, this team will meet regularly through the JRC for the purpose of planning, reviewing and managing the operation.

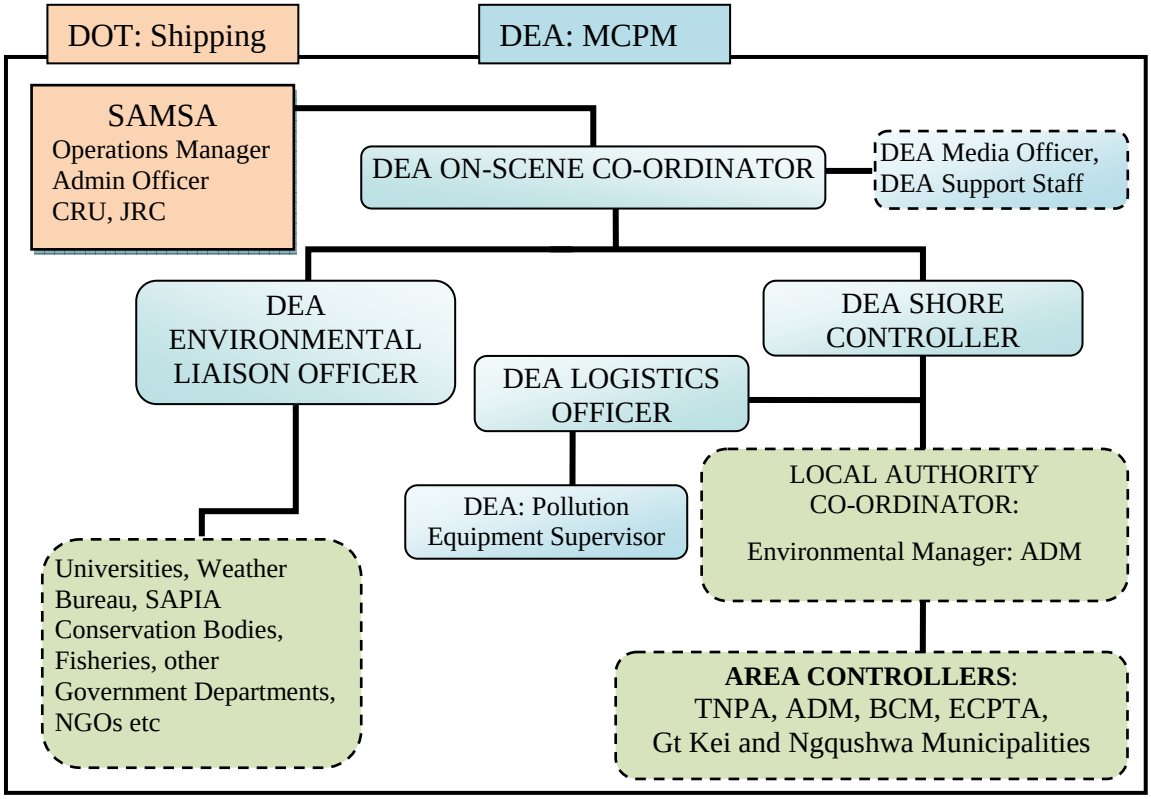


Figure 4: Diagram showing the DEA Response Team and Associated Links

8.1.1 Joint Response Committee (JRC)

The Joint Response Committee is convened on the instruction of the SAMSA Operations Manager, usually for Tier 2 or Tier 3 incidents, after consultation with DEA and other major role players. The JRC is chaired by SAMSA's Operations Manager or the DEA OSC if no shipping casualty is involved. The role of the JRC is to:

- bring together all major role players to discuss and agree to plans for prevention and combating of oil pollution during the incident;
- co-ordinate all operations and approve expenditure to ensure prompt payment by insurers;
- meet regularly, usually daily, but will decrease as the urgency abates;
- provide a co-ordinated and factual response to the media and arrange press conferences with major stakeholders.

The convening of the JRC and establishing the JOC with communications and facilities will be undertaken by the Casualty Response Unit (CRU) if a shipping incident is involved. Where a CRU is not involved the DEA OSC and/or the SAMSA Operations Manager will establish the JOC.

The protocol for the management of the JRC is provided in the National Plan. A record of decisions taken at the JRC should be provided after each meeting. (See example in Appendix V)

The following representatives will make up the JRC, as relevant:

- SAMSA Operations Manager or delegated Officer (Chair);
- Ships Owner / Insurer;
- Independent Auditor;
- DEA On Scene Co-ordinator (Alternate Chair);
- DEA Environmental Officer;
- SAMSA Admin Officer;
- Local Authority Co-ordinator;
- TNPA;
- Area Controllers;
- Media Officers;
- SANCCOB representative.

8.1.2 Casualty Response Unit (CRU)

In the event of there being a significant maritime involvement resulting from a shipping incident, such as salvage of stricken vessels, SAMSA will establish a Casualty Response Unit. This could either be set up in conjunction with JOC or at another convenient location such as the Port Control Centre located at the Port of East London. This unit will be equipped with the necessary telephones, radios, maps, charts, state boards etc., and will serve as the operational headquarters for the following persons:

- SAMSA Operations Officer;
- Senior ship surveyors;
- Naval architect;
- SAMSA legal officer;
- SAMSA administration officer;
- TNPA representative (if a Port is involved).

The SAMSA CRU team shall undertake the following actions:

- Determine the name and contact details of the vessel's owner;
- Establish the insurance status of the vessel and the name of the P&I Club, if any;
- Request details of the fuel oils and other harmful substances on board;
- Evaluate the specific threat of the pollution posed by the vessel in respect of her bunkers and/or cargo on board;
- Obtain any additional particulars, calculations or considerations required by the Operations Manager;
- Convene a JRC and establish a JOC with communications and facilities;
- Obtain a cargo manifest for the ship;
- Prepare press releases;
- Inform affected authorities and parties; and
- Where appropriate, representing SAMSA as part of any active intervention aboard the maritime casualty.

8.2 JOB DESCRIPTIONS OF DEA AND RELEVANT SAMSA OFFICIALS

For convenience, the following are called Job Descriptions but are solely to inform Authorities of the pertinent tasks that will be undertaken by the officers assigned these functions for the duration of the incident. For reasons of brevity and clarity the responsibilities and tasks that fall outside the direct activities for preventing and combating pollution of the shoreline by oil are omitted.

8.2.1 DEA On-Scene Co-ordinator

- Determine whether the shoreline is at risk of being impacted by oil.
- Having established that the shoreline is at risk, determine:
  - the probable time and site of the initial impact
  - the anticipated magnitude of the impact
  - the probability of a fire hazard
  - the level of response required: Tier 1, 2 or 3 and the response required by each local authority (ALERT, MOBILISATION or IMPLEMENTATION).
- Inform SAMSA and decide on the requirements of a Joint Response Committee. In light of the above, establish the departmental Response Team and decide on the location for the control centre as set out in Section 8.5.
- Agree on response actions required, with other stakeholders and monitor these activities.
- Decide on deployment of DEA equipment and resources: aerial surveillance, booms, skimmers etc., as required.
- Co-ordinate the subsequent activities of the Response Team, including setting up daily meetings, and representing DEA at the JRC.
- Activate the systems for receipt of air surveillance observations, weather forecasts, satellite imagery and other day-to-day information at the control centre.
- Continually gather facts for re-evaluating the situation, and inform other members of the Response Team and Local Authorities of any changes in the level or approach of response measures.
- Obtain approval for steps where financial implications are involved.
- Ensure that accurate records of events are being kept.
- Arrange for the disposal of collected oil and oily debris after consultation with the relevant authorities.
- Keep Shore Controller informed of all developments at the JRC.

8.2.2 DEA Shore Controller

- Advise the Local Authorities of the levels of response required.
- When necessary, establish a Shore Control Centre.
- Ensure, where possible, that the recommended priority protective measures are implemented timeously. Advise on boom deployment.
- Ensure that the protection and clean-up of the shoreline is commensurate with the minimum of environmental damage.
- Control the shoreline clean-up to achieve maximum cost effectiveness with the resources available.
- Ensure that the Area Controllers (See Section 8.4.2) keep proper and accurate records.
- Keep the DEA OSC and Environmental Liaison Officer informed of all shore-based response operations.

8.2.3 DEA Logistics Officer

- Immediately upon appointment, ascertain the availability of the equipment listed in Section 12 from the Local Authority Co-ordinator for this zone as well as for the adjoining zones and establish requirements for DEA equipment.
- Bring into operation and maintain the communications network at the extent authorised.
- Continually maintain an up-to-date data bank on the availability and deployment of equipment and materials in the zones under threat of impact of oil as well as in the adjoining zones.
- Arrange for procurement of additional materials and equipment as may be required by DEA Shore Controller.
- Within the framework of government policy make all the required arrangements for the transport and accommodation of Departmental Officers.

8.2.4 DEA Environmental Liaison Officer

- Co-ordinate collection of information regarding environmental matters e.g. ecological sensitivity of areas, weather predictions etc and ensure that the JRC remains informed.
- Supply DEA On-Scene Co-ordinator with all relevant information.
- Liaise with environmental experts, NGO’s and I&AP’s.

8.2.5 DEA Pollution Equipment Supervisor

The DEA pollution equipment is held at the DEA Pollution Store in Paarden Island in Cape Town. The store is manned by one supervisor and two artisans. The supervisor is responsible for:

- Maintaining a register of all equipment;
- Ensuring equipment is well maintained and ready for deployment;
- Adhering to maintenance schedules for all equipment;
- Loading and dispatching equipment when required;
- Assisting with deployment of equipment when required;
- Ensuring staff are adequately trained to handle equipment;
- Keeping records of where and when equipment is deployed;
- Ensuring equipment is cleaned or replaced after each incident.

8.2.6 DEA Media Officer

- Liaise with other organisations in terms of media response.
- Provide press releases, press meetings and photographic opportunities, working through JRC where appropriate.
- Participate in daily operational meetings.
- Ensure Website is maintained and updated.
- Co-ordinate VIP visits.
- Maintain archive of media response for permanent record.

8.2.7 SAMSA Operations Manager

- Where appropriate will set up a Casualty Response Unit.
- Convene a JRC and establish a JOC with all communications and facilities.
- Co-ordinate and supervise all technical activities relating to a shipping casualty.
- Supervise any oil transhipments.
- Co-ordinate legal and financial aspects relating to an incident, in collaboration with Legal Adviser and SAMSA Administration Officer.
- Consult with DEA On-Scene Co-ordinator in matters relating to environmental considerations connected to a potential or actual oil spill.

8.2.8 SAMSA Administration Officer

- When required, with the assistance of the DEA On-Scene Co-ordinator and the SAMSA Operations Manager, negotiate and arrange for guarantees/undertakings to be obtained from owner / agents / insurance representatives.
- Undertake the task of minute's secretary for meetings called by JRC.
- Maintain separate, complete and up to date records of all technical and environmental activities pertaining to the spill incident and of expenditure incurred by all parties involved.
- Attend to the purchase of consumables and capital equipment required by both the SAMSA and Department of Environmental Affairs after having obtained the necessary authorisation.
- Receive and authenticate all claims for loss or damage as envisaged either in Section 9(1)(a) or Section 9(1)(c) of Act No.6 of 1981 and process for payment.
- Receive and authenticate all statements of account for protection measures taken and clean-up costs incurred by Local Authorities and parties contracted to SAMSA or Department of Environmental Affairs and process for payment. (Claims relating to coastal protection and clean-up are to be channelled through the Department of Environmental Affairs before processing.)

8.3 LOCAL AUTHORITIES ORGANISATION

In the event of an oil spill, Local Authorities are required to take certain actions and nominate certain persons in order to be able to respond effectively to the spill.

In this Zone, the Environmental Manager of the Amathole District Municipality has been nominated to undertake the task of Local Authority Co-ordinator (See Section 6.2 and 8.4.1). In addition, when alerted, all Local Authorities concerned must nominate officers from within their organisations to become Area Controllers, Response Officers and Administration Officers for the duration of an incident. The inter-relationships of these officers, whose efforts will be supervised by the DEA Shore Controller, are depicted in the organogram in Figure 5. The Area Controllers (for areas A-E as indicated in Section 10) will co-ordinate the activities of the Site Officers.

In terms of response actions, the Local Authorities will be required to provide assistance in the form of supervision, labour, transport and equipment for the protection and clean-up of their beaches and estuaries as set out in Section 10. They will also be responsible for making arrangements with local Traffic and Police Officers to ensure traffic and crowd control in the vicinity of the impacted area.

8.4 JOB DESCRIPTIONS OF LOCAL AUTHORITY OFFICERS

As in Section 8.2, the Job Descriptions prescribed here include only those tasks to be undertaken by the appointed officers in the event of an oil spill incident.

8.4.1 Local Authority Co-ordinator

- Establish and maintain the communications network between DEA Shore Controller and Area Controllers.
- Provide the DEA Logistics Officer with information on the present deployment of equipment in the Zone and the availability of other equipment within the Zone.
- Represent local authorities at JRC if necessary.
- Co-ordinate the supply of equipment between Local Authorities.
- Ensure adequate traffic and crowd control.
- Issue permits to DEA personnel and scientific advisers to allow free access to shoreline.
- Undertake preparatory activities as listed in Section 6.2.

8.4.2 Area Controller

- Supervise shoreline protection and clean-up measures and ensure effective control of work parties on site.
- Obtain approval for purchase of capital equipment.
- Procure consumables, labour and machinery hire.
- Ensure that time sheets for charge hands, labour and machinery are kept on an hourly basis.

8.4.3 Site Officer

- Supervise clean-up teams.
- Keep log of manpower and equipment used.
- Collect samples.
- Keep Area Controller informed of progress and areas requiring special attention.

8.4.4 Area Administration Officer

- Maintain time sheets for charge hands, labour and machinery on an hourly basis and the tasks performed against these time sheets.
- At the end of the incident, provide a full report on the operations undertaken and detailed costing of each operation.

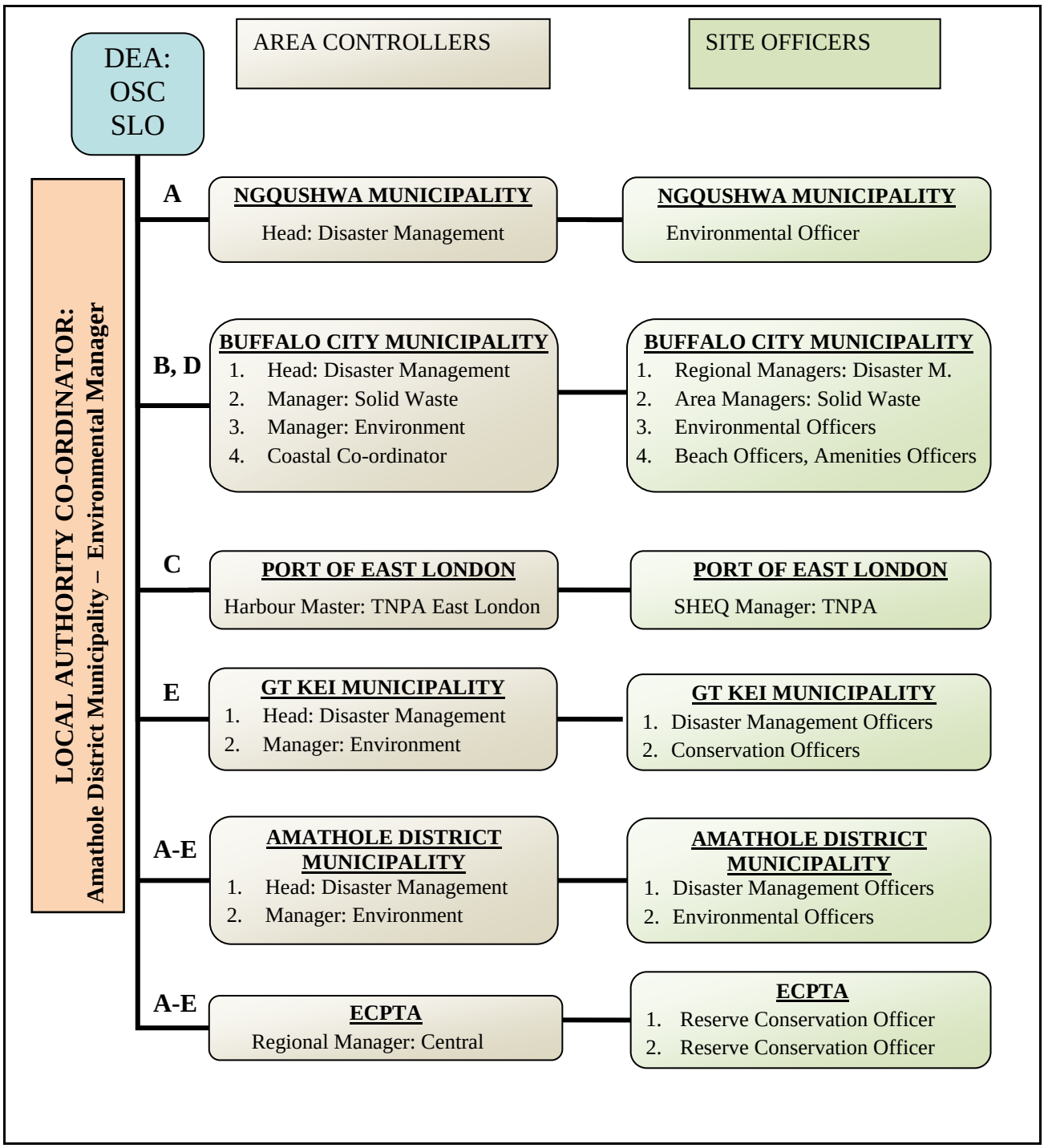


Figure 5. Diagram showing the Local Authority Organisation for Areas A-E (in Section 10)

8.5 FACILITIES

8.5.1 Joint Operations Centre (JOC)

The Joint Response Committee (JRC) which is described in Section 8.1.1 will operate from the Joint Operations Centre (JOC). The JOC will be established at a suitable venue as close as possible to the response operation, to deal with Tier 2 or Tier 3 spills. In the Amathole Zone this would usually be the Buffalo City Municipality Disaster Management Centre which is located at the main Fire Station in Fleet Street, East London. This Centre has a conference room which can accommodate up to 40 people.

The co-ordination of all shoreline protection and clean-up activities will take place from this Centre. The Centre comprises a sophisticated communications room and operations room from where the co-ordination of manpower and resources will be undertaken during a major oil spill situation.

For smaller incidents, other facilities could be used, such as the local municipality offices.

The JOC will provide the communications and facilities required for the Joint Response Committee. This facility will need to be equipped with telephones, fax machines, photocopier, white boards, computer and email facilities, and all conveniences to run meetings. It would also be useful to have a digital projector and screen for relaying photographic information.

8.5.2 Shore Control Centre (SCC)

In the event of large quantities of oil (Tier 2 or Tier 3 spills) impacting, or threatening to impact the shoreline, a Shore Control Centre will be established at a convenient location. Depending on the circumstances and extent of the operation, this Shore Control Centre may either be established in conjunction with the JOC or as a separate entity. Local disaster management control centres or even offices or hotels could accommodate this centre. The co-ordination of all shoreline protection and clean-up activities will take place from this Centre. The same facilities as described for the JOC are required. The following persons will operate from this facility:

- DEA Shore Controller
- DEA Logistics Officer
- Local Authority Co-ordinator (alternatively at JRC)
- Local Authority Area Controllers (alternatively at JRC)
- DEA On-Scene Co-ordinator (alternatively at JRC)
- DEA Environmental Liaison Officer (alternatively at JRC)

8.5.3 Local Shore Control Centres

In the event of lesser spill situations, where oil has impacted or is threatening to impact the shoreline in restricted localised areas, protection and clean-up operations may be co-ordinated from the Local Shore Control Centre to be established at the time. These Centres are in direct contact with the JOC. The number of officers operating from these centres will depend on the size and range of the spill.

8.5.4 Mobile Control Units

The Amathole District and Buffalo City Municipalities have mobile units, some of which have off-road capabilities, which can be used for on- site co-ordination. These self-contained vehicles are well equipped with communication facilities. They could accommodate the Shore Logistics Officer, Area Controllers, and Area Administration Officers, depending on the circumstances.

8.6 COMMUNICATIONS

8.6.1 Telephone and Cell Phone

This will be the main form of off-site communications between the control centres and other outside agencies or bodies. During high profile incidents, cell phone networks may become jammed due to extensive use by media and response personnel, and other forms of communications may have to be utilised.

8.6.2 E-mail and Website

E-mails are an effective way of distributing information such as press releases, weather reports and photographic accounts from on-site locations. Distribution groups can be set up in the address list at the beginning of the incident to facilitate circulation. Often, personnel are working remote from their normal offices, and hence receipt of emails should not be taken for granted. It is recommended that receipt of emails be confirmed either through follow up phone calls for urgent matters, or by requesting a "read receipt" option.

A website, managed by DEA, with all the relevant information pertaining to the incident is a useful tool for ensuring that the factual information is relayed correctly to the other stakeholders, the press and members of the public. This could be a website dedicated to oil spill response and contingency planning and could include all the oil spill contingency plans. Such a site would be invaluable in keeping local authorities informed of amendments to their plans and for sharing lessons learned.

8.6.3 Radio

Radio facilities may be utilised for communications among the various agencies involved in the oil spill response:

- DEA Officers may communicate between themselves and with the pollution vessels and aircraft by means of their own VHF sets, using the marine frequencies.
- Amathole District Council has a limited radio network at present.
- Buffalo City Disaster Management has mid band and high band V.H.F. communications with City Sector Departments. It must be noted that not all areas of the coast are covered by the network. The centre also has an H.F. radio covering 0 – 30 MH^{z}. Radio amateurs (HAMS) could assist with mobile units.
- The Port Control (TNPA) operates mainly on VHF marine frequencies and is in contact with ships at sea, the DAFF Pollution Control Vessels and the DEA K9 surveillance aircraft.

8.6.4 Media Response and VIP Visits

A major oil spill is of immediate interest to the local and international media. It is in the public interest, and the interest of all concerned, to keep the media informed as fully and regularly as possible. Failure to consider the media response at an early stage may have serious implications for the management of the whole incident.

A designated DEA media officer (refer to Section 8.2.6) will arrange press conferences and issue regular news bulletins. Information provided should be consistent with other organisations and as accurate as possible. Good co-operation between all press officers is essential, and combined press conferences will be arranged through the JRC. The media must not be allowed to interfere with the operational activity of the emergency operation.

A strategy for interacting with the media should be developed pro-actively, and daily press conferences and news bulletins should be arranged. A media information pack should be prepared prior to any incident. This will facilitate good media relations during an event. An initial pro-forma press holding statement should be prepared by the media officer. A press release/sitrep template is provided in Appendix VI. A dedicated website will provide a reliable source of information, and should be updated regularly.

Whilst staff cannot be prevented from talking to the media, they should be advised to refer all queries to the media officer. If they are hounded by reporters, they should limit their comments to exactly what they are doing and not be tricked into making assumptions or discussing issues on which they are not fully informed. The media officer should be pro-active in facilitating opportunities for the press to interview response personnel.

It is inevitable that, in the case of a major incident, Ministers or other VIP's will wish to visit the site or response centres. The Media Officer should ensure that these visitors are properly escorted and informed, and should advise management and staff of these visits during the daily meetings.

9. RISK ASSESSMENT AND COASTAL SENSITIVITIES

9.1 IDENTIFICATION OF RISKS

The National Contingency Plan describes the risks associated with high volumes of shipping traffic passing around the South African Coast. All maritime traffic, calling at South African Ports or in transit around the coast, presents a risk of marine pollution resulting from collisions, groundings, oil cargo and bunker transfers, structural failure or other operational spills. Various types of oil from light crude to heavy bunker fuels can be released from these types of casualties.

The table below summarises a few of the major incidents which have occurred off the South African Coast.

Table 9.1 Some major incidents impacting the South African Coast

YEAR	INCIDENT	OIL SPILLED	ENVIRONMENTAL IMPACT
1968	*ESSO ESSEN*	15 000 tons crude oil	3000 oiled penguins 500 oiled gannets Coastline impacted
1971	*WAFFRA*	15 000 tons crude oil	1200 oiled penguins Coastline badly impacted
1972	Unidentified vessel	unknown	1700 oiled penguins
1983	*CASTILLO DE BELLVER*	190 000 tons crude oil	1800 oiled gannets No coastline impacted
1994	*APOLLO SEA*	2400 tons heavy fuel oil	Major beach clean-up operation 10000 oiled penguins
2000	*TREASURE*	1300 tons heavy fuel oil	Major beach clean-up operation 19 000 oiled penguins 19 500 penguins relocated

Casualties involving bulk cargo carriers have resulted in significant spills of heavy fuel oil (Apollo Sea and Treasure) off the South African Coast. Although such quantities are low by comparison to potential tanker spills, the heavy fuel oil is more persistent than crude oil and has resulted in major impacts on coastal areas and seabird populations. The length of time the oil has been at sea and the types of weathering it has been subjected to, will change its characteristics, and hence the level of response required.

9.2 HEALTH AND SAFETY

The health and safety of the people involved in the response operation is of paramount importance. All personnel should be made aware of the hazards associated with their activities. Often people will be working in unfamiliar surroundings, and, where conditions are particularly hazardous, each participating organisation may need its own safety officer. Protective clothing should be provided. Training and exercises can be used to identify health and safety issues.

The following key risks are associated with oil spill response:

- toxic fumes in confined spaces;
- general stress and fatigue of personnel;
- risks associated with equipment handling;
- falling into the sea (hypothermia or drowning);
- slipping on oily decks or oily rocks;
- risks associated with handling oiled wild life;
- sunstroke;
- back injuries from lifting heavy items.

Stakeholders should identify all the health and safety risks associated with their operations and put suitable mitigatory measures in place.

9.3 VULNERABILITY OF THE EASTERN CAPE COASTLINE

The stretch of coastline covered by this plan falls within a low risk area in terms of oil pollution. A large number of slicks have been sighted further offshore, but few of these actually impact the coastline. The dominating influence along this stretch of coastline is the Agulhas Current. The laden tanker limit is well beyond the current core position and spilled oil would only reach the shore under exceptional conditions.

Once oil has been spilled at sea, it drifts under the influence of winds, currents and waves. Since most of the surface and inshore currents around the coast of South Africa are themselves strongly influenced by wind direction and speed, a simplistic prediction of oil movement can be based purely on wind data. Oil tends to move at between 2 and 3% of the wind speed, and at a slight angle to the left of the wind direction.

North-easterly to south-westerly winds (i.e. parallel to the shore) predominate along this part of the Eastern Cape Coast, with a strong offshore component (north-westerly) in winter, when wind speeds are higher.

Occasional onshore winds, driven by high pressure ridges, increase the risk of oil spills reaching the shoreline. These systems can occur at any time of the year but are predominant during spring and autumn. These are the rain systems in this area which also result in reduced visibility at sea.

Flotsam at sea is subject to the same influences as oil. Beaches where such material tends to be deposited will therefore also be those where oil is most likely to come ashore.

Accessibility to some areas is often limited and this will determine the type of response required.

9.4 COASTAL SENSITIVITY

This Zone is characterised by numerous (over 30) estuaries and lagoons, most of which are often closed, but may breach after heavy rains inland. Others are permanently open and would be impossible to close.

Detailed information on the environmental sensitivity of the coast to oil pollution can be found in the Coastal Sensitivity Atlas of Southern Africa. This includes:

- Important habitats for birdlife, in particular, migrant waders at the mouth of the Keiskamma River.
- Oiled penguins, which forage offshore, periodically come ashore in the Amathole Zone.
- A number of estuaries and lagoons which are important for bait organisms, fish, water birds and recreational amenities.
- Coastal Forest Reserves.
- Spawning areas for species such as anchovy and sole.
- Recreational amenities such as popular beaches, tidal pools, surfing, angling and sailing areas.
- Commercial considerations such as shellfish and seaweed collection, demersal and linefish landings.
- Seawater intakes for fish farms, aquarium and City sanitation system.

9.5 PRIORITIES FOR PROTECTION AND CLEAN-UP

In the event of a major oil spill, large stretches of the coastline may be threatened and, ultimately, impacted by oil. The response to such a spill can be divided into two aspects:

a) Protection
b) Clean-up

In both cases, the resources available for the operation are generally limited. Thus, areas meriting priority attention will have been identified ahead of time. A list of the top priorities is given in Section 9.6, while priority ratings for all sites are given in Section 10.

Priorities are established on the grounds of vulnerability, environmental sensitivity and socio-economic importance.

9.6 LISTING OF PRIORITIES

The priorities in the Amathole Zone are the estuaries and amenity beaches. Some of the river mouths will be impossible to close and would need to be boomed. However, at present, the availability of booms is limited. The only effective protective measures in these areas would be the dispersal of oil further offshore and the protection of individual salt marshes using absorbent barriers.

Priorities in the Amathole Zone are identified as follows:

9.6.1 Protection Priorities

1. **Estuaries**: The most important estuaries in this area are those that are permanently open such as the Keiskamma, Tyolomqua, Nahoon, Gqunube, Kwelera, and the Great Kei. Mangroves (*Avicennia marina*) occur in most of these estuaries, and would be sensitive to protection measures affecting salinity levels. However, the importance or vulnerability of the temporary open/closed systems should not be overlooked, as overtopping during high spring tides could create serious problems. These estuaries are also often open during the period of most vulnerability; i.e. during onshore driven systems. Specific protection measures are discussed in Section 10.
2. **Harbours**: The Port of East London on the Buffalo River.

9.6.2 Clean-up Priorities

Should the protection measures have failed, then:

1. Seabird rescue and rehabilitation
2. Estuaries
3. Amenity beaches and tidal pools.
4. East London Harbour

9.7 STRATEGY FOR PROTECTION AND CLEAN-UP

In managing the response operation, the aims are prioritised as follows:

- First, to prevent pollution occurring
- Second, to minimise the extent of any pollution that occurs
- Third, to mitigate the effects of that pollution

The DEA On-Scene Co-ordinator, in consultation with SAMSA and the JRC, will decide on the actions required to mitigate the extent of pollution. Initially the DEA surveillance aircraft will be requested to investigate the situation. Decisions will be made regarding the following methods of response:

- Assessing and monitoring;
- Dispersant spraying operations according to strict policy guidelines;
- Mechanical recovery operations;
- Cargo transfer operations;
- Protection of coastal resources;
- Shoreline clean-up techniques.

The aim of the operation is to minimise the damage (environmental, ecological, amenity or financial). The decisions will be based on the following considerations:

- The severe limitations on the effectiveness of at sea recovery techniques;
- The distance from shore of the casualty;
- The type of oil spilled;
- Weather conditions and currents;
- The time needed to deploy equipment and resources to the scene;
- Environmental sensitivities in relation to clean-up methods.

Oceanographic conditions off the South African coast are not generally conducive to containment and recovery of oil at sea. International experience has shown that it is unlikely that more than 20% of spilled oil can be recovered at sea. Booms and skimmers should therefore only be used in sheltered ports and coastal areas, unless particularly calm conditions prevail offshore.

Booms and barriers will be used to protect sensitive coastal features such as estuaries, harbours and marinas. Where insufficient booms are available, barriers can be constructed from other materials such as straw.

Manual clean-up measures are generally preferred for sandy beaches, to minimise the amount of sand removed. Mechanical equipment, such as bulldozers may be used in situations where the oil is very thick.

Seabirds are particularly vulnerable to oil pollution. Some species such as penguins and gannets can be successfully rehabilitated. The East London Aquarium has the capability to treat approximately 30 oiled penguins, and can provide a temporary (24 hour) holding facility for up to 200 oiled seabirds. These birds would then need to be transferred to SANCCOB in Cape Town or SAMREC in Port Elizabeth for

rehabilitation. Although there are no penguin colonies in this Zone, penguins often forage over large distances offshore, and in the past, there have been incidences when oiled penguins have come ashore along this part of the coastline.

One of the preferred strategies is to contain clean penguins within their colonies until the oil is cleared from the area, or to remove breeding pairs to prevent them from becoming oiled. This may separate them from their young, and so chicks may need to be collected for captive rearing.

Further discussion regarding the use of dispersants needs to be initiated by DEA with the other stakeholders. There may be a pertinent case for the early use of dispersants to protect seabird populations, and to prevent oil from entering estuaries.

9.8 SITE SPECIFIC INSTRUCTIONS FOR PROTECTION AND CLEAN-UP

Specific instructions for protection and clean-up of the coastal features of this Zone are given in geographical sequence predominantly from west to east in Section 10. It should be noted that the use of oil spill dispersants is NOT PERMITTED for treating oil that has impacted the shoreline (see Addendum B). In terms of the "Policy on the use of oil spill dispersants in South African waters", the use of dispersants at sea can only be undertaken with approval through DEA (see Addendum F). In short, the policy prohibits the use of dispersants in water depths less than 30 metres and within 5 nautical miles of the coast.

Priorities for both protection and clean-up are indicated in Section 10 by means of the words "high", "medium" and "low" priority ratings.

It will be noticed that in certain areas no clean-up actions are recommended. Exposure to heavy surf action in some areas promotes natural cleansing of both sandy beaches and rocky shores. In addition, there are stretches of the coast which are more or less inaccessible, and clean-up will therefore only be attempted in the event of heavy deposits of oil, from where oil may be refloated and move to estuaries or identified amenity beaches. There may be certain times when it will be necessary to clean beaches which have been assigned a medium or low rating, even if they are only lightly oiled; for example, if an event is to be staged there, or if the beach is used for walking dogs etc.

In some instances, clean-up operations could be more damaging than the oil, and in these instances it might be best to "do nothing."

A map of the whole Zone appears in Section 10. Each stretch of coastline on the map is marked with a letter of the alphabet and is apportioned to the responsible local authority for clean-up. In certain cases, abutting Responsible Authorities may be required to undertake clean-up measures for the neighbouring Local Authority, even though these areas do not fall under their jurisdiction. This may be the case where small stretches of coastline are bordered by large stretches or where certain Local Authorities do not have sufficient resources to undertake the required tasks. These areas are marked with a (+) sign in the margin of Section 10.

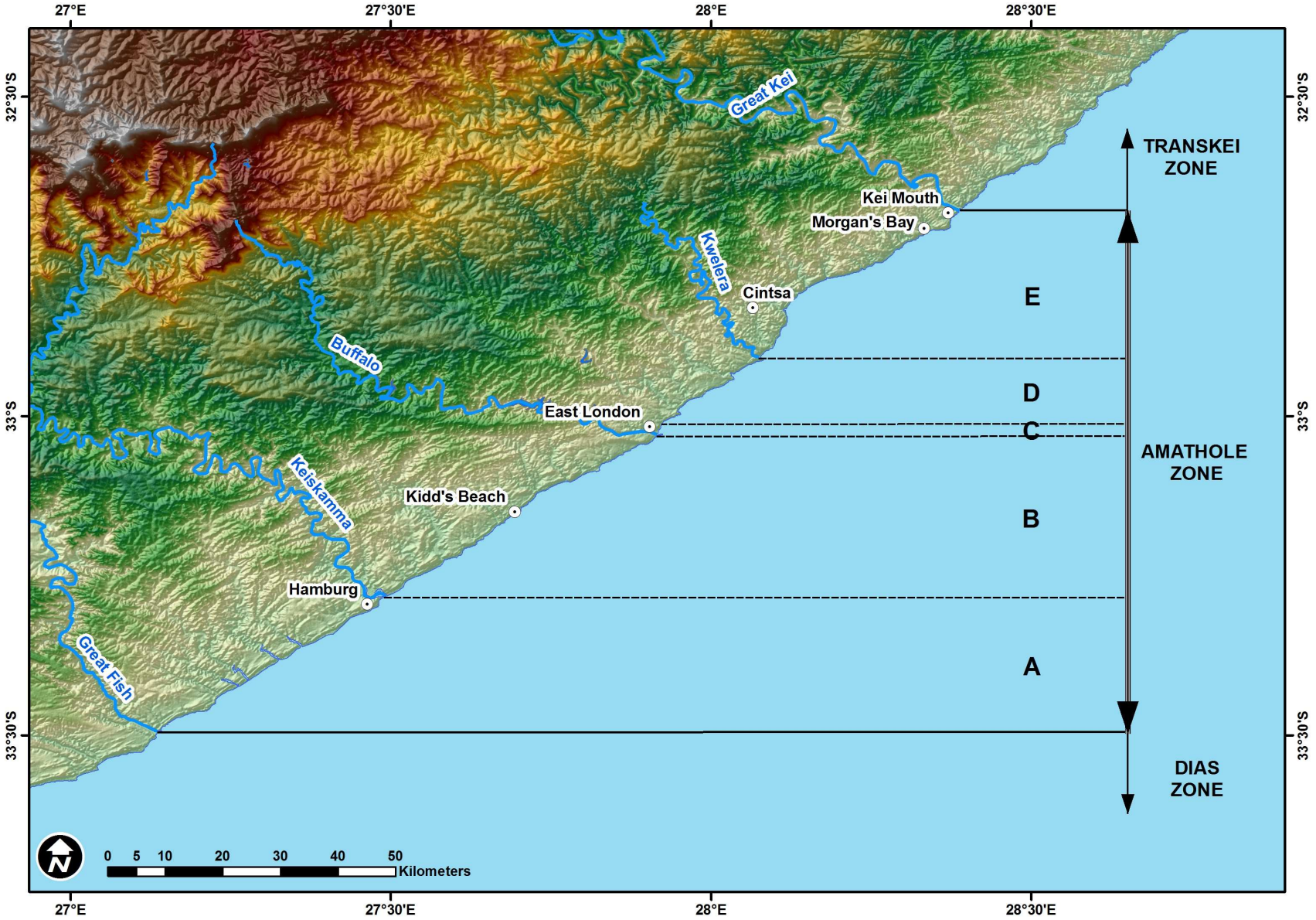
Maps of estuaries and more detailed instructions referred to under protective action can be found at the end of Section 10. It should be noted that these are the current, recommended procedures and that the linear scales indicated on the estuary maps are approximations only. Should the river mouth conditions have changed, or should the suggested materials not be available, a different approach might have to be adopted. For example, recent storms along the Eastern Cape Coast resulted in the erosion of sand from many coastal areas, and there may not be enough sand available to raise the barriers to prevent overtopping. A range of possible alternatives can be found in the document titled "Emergency Barriers from Materials of Opportunity" (EBMO), but it might be necessary to fall back on individual ingenuity and initiative. Diagrams illustrating the construction of barriers are provided at the end of section 10.

The closure of open, medium sized temporary open / closed systems by mechanical manipulation of sand across the mouth will prove difficult. Therefore, before any mechanical contingency is enacted relevant expertise should be consulted.

General details of methods for protection and clean-up can be found in Addendum B.

Section 10 sets out the protection measures that are to be put into immediate effect when requested by the DEA Shore Controller as well as the clean-up measures that are to take place if the coastline is impacted by an oil spill.

10. SITE SPECIFIC RESPONSE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Great Kei
Kei Mouth
Morgan's Bay
Kwelera
Cintsa
Buffalo
East London
Keiskamma
Kidd's Beach
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Kilometers

10. SITE SPECIFIC RESPONSES

SITE: Responsible Authority Pertinent Detail	PROTECTION Priority Rating	 Action	CLEAN-UP Priority Rating	 Action
A: GT FISH RIVER TO HAMBURG **(Previous Ciskei Area)** Ngqushwa Municipality assisted by + Amathole District Municipality: Includes Coastal Forest Reserve which is administered by ECPTA				Eastern Cape Parks and Tourism Agency to be consulted with regard to clean-up in Coastal Forest Reserves.
Gt. Fish River falls in the Dias Zone Plan.			Medium	Beaches and rocky areas to be cleaned of medium to heavy deposits of oil.
Long sandy beaches with some wavecut rocky platforms. Limited access in places. Some amenity beaches located close to river mouths. Large hotel resort on eastern bank of Fish River.			High	Amenity beaches to be cleaned at all times, especially where oil can be refloated towards the estuaries.
Old Woman's River: mouth usually closed.	Medium	In the event of high spring tides, raise barrier to prevent overwash as shown in Map 12 A.	High	Should oil enter the river, the DEA On-Scene Co-ordinator must be advised immediately and clean-up should only be undertaken under supervision of the DEA Shore Controller.
Mpekweni River: mouth usually closed, lagoon supports rich bird life. There is a large hotel resort on the eastern bank.	High	In the event of high spring tides, raise barrier to prevent overwash as shown in Map 12 B.	High	
Mtati River: mouth usually closed limited access.	High	In the event of high spring tides, raise barrier to prevent overwash as shown in Map 12 C.	High	Should oil enter the river, the DEA On-Scene Co-ordinator must be advised immediately and clean-up should only be undertaken under supervision of the DEA Shore Controller.

SITE: Responsible Authority Pertinent Detail	PROTECTION Priority Rating	 Action	CLEAN-UP Priority Rating	 Action
Mgwalana River: mouth usually closed with some cottages on the eastern bank.	High		High	Should oil enter the river, the DEA On-Scene Co-ordinator must be advised immediately and clean-up should only be undertaken under supervision of the DEA Shore Controller.
Bira River: mouth usually closed. Holiday cottages on the eastern bank.	High	In the event of high spring tides, raise barrier to prevent overwash as shown in Map 12 D.	High	
Gqutywa River: mouth usually closed, limited access.	High	In the event of high spring tides, raise barrier to prevent overwash as shown in Map 12 E.	High	Should oil enter the river, the DEA On-Scene Co-ordinator must be advised immediately and clean-up should only be undertaken under supervision of the DEA Shore Controller.
Ngculura Stream: mouth usually closed; limited access.	Medium		High	
Fresh Water Poort Stream: mouth usually closed; limited access.	Medium	In the event of high spring tides, raise barrier to prevent overwash as shown in Map 12 F.	High	Should oil enter the river, the DEA On-Scene Co-ordinator must be advised immediately and clean-up should only be undertaken under supervision of the DEA Shore Controller.
Blue Krans Stream: mouth usually closed; limited access.	Medium	In the event of high spring tides, raise barrier to prevent overwash.	High	
Mtana Stream: mouth usually closed; limited access.	Medium	In the event of high spring tides, raise barrier to prevent overwash.	High	Should oil enter the river, the DEA On-Scene Co-ordinator must be advised immediately and clean-up should only be undertaken under supervision of the DEA Shore Controller.
		In the event of high spring tides, raise barrier to prevent overwash.		
		In the event of high spring tides, raise barrier to prevent overwash.		

SITE: Responsible Authority Pertinent Detail	PROTECTION Priority Rating	 Action	CLEAN-UP Priority Rating	 Action
B: HAMBURG TO BUFFALO RIVER Buffalo City Municipality: Includes Coastal Forest Reserve which is administered by ECPTA		.		Eastern Cape Parks and Tourism Agency to be consulted with regard to clean-up in Coastal Forest Reserves.
Hamburg Area: Amenity beach extremely popular during holiday season. Camp site and Hotel at Keiskamma River Mouth.			High	Clean amenity beach prior to & during
Wave cut rocky coastline.			Low	Leave to natural cleaning unless deposit is particularly heavy or spill occurs during holiday season. Water jets can be used.
Collection of shellfish.	High	Inform concession holders and public of dangers of contaminated shellfish.		
Keiskamma salt marsh. Category "A" conservation area. Forms a vital part of the estuarine and marine ecosystem. 81 species of fish and important bird habitat, especially waders. Natural functioning of salt marsh ecosystem should be maintained.	High	During strong flow conditions, oil would be prevented from entering the estuary. During low flow conditions the mouth would need to be closed, as shown in Map 12 G. Notify SANCCOB of any oiled seabirds.	High High	Should oil enter the estuary, the DEA Shore Controller should be advised immediately to supervise clean-up. Oiled birds should be cared for until they can be transported to a cleaning station.
Oyster beds (currently not operational).	HIgh	Notify Mbasa Fish Farm.		
Landing "beach" for fishing boats (just inland of camping site).	High	Advise owners to remove boats from water.	High	Clean "beach" all year round.

SITE: Responsible Authority Pertinent Detail	PROTECTION Priority Rating	 Action	CLEAN-UP Priority Rating	 Action
Keiskama River to Tyolomnqa River				
Unspoilt stretches of sandy beaches. No harvesting of seaweed permitted. Sensitive vegetated sand dunes. Limited vehicular access; only from Kiwane & South of Tyolomnqa River.			Low	Shoreline to be left to natural cleaning unless there is a heavy deposit of oil.
Ngqinisa River: mouth usually closed but overwash may occur during high spring tides.	High	Prevent overwash by raising barrier.	High	Should oil enter the estuary, the DEA Shore Controller should be advised immediately to supervise clean-up.
Amenity beach at Kiwane River mouth, popular during holiday season.			High	Amenity beach to be cleaned all year round
Kiwane River: mouth usually closed, but overwash may occur during high spring tides.	High	Should overwash occur, sand barrier to be raised as shown in Map 12 H.	High	Should oil enter the estuary, the DEA Shore Controller should be advised immediately to supervise clean-up.
Campsite adjacent to lagoon and collection of shell fish	High	Advise public of health hazards associated with eating contaminated shellfish.		
Tyolomnqa River to Kaysers Beach:				
Tyolomnqa (Chulumna) River: mouth usually open, with tidal penetration. Proposed nature reserve. White mangrove stands.	High	If open, mouth would prove difficult to close, and booming would be the preferred option. Overwash to be prevented if necessary as shown in Map 12 I.	High	Should oil enter the estuary, the DEA On-Scene Co-ordinator should be advised immediately and clean-up should only be undertaken under supervision of the DEA Shore Controller.
Sandy Beach with limited access.			Medium	Beach to be cleaned of medium and heavy deposits of oil.
Rocky beach at Kaiser's Beach Hamlet			Medium	Rocky area to be cleaned of medium to heavy deposits of oil.

SITE: Responsible Authority Pertinent Detail	PROTECTION Priority Rating	 Action	CLEAN-UP Priority Rating	 Action
Kaysers Beach to Kidds Beach: Coastline characterised by small sandy beaches and wavecut rocky platforms with limited access.			Medium	Where possible, beaches to be cleaned of medium to heavy deposits of oil. Rocky areas to be left to natural cleaning unless there is a heavy deposit of oil.
New Hope Estuary (Shelberts Stream at Kaisers Beach): mouth usually closed.	High	If open, mouth to be closed otherwise, overwash to be prevented if necessary as shown in Map 12 J.	High	Should oil enter the estuary, the DEA On-Scene Co-ordinator should be advised immediately and clean-up should only be undertaken under supervision of the DEA Shore Controller.
Lilyvale River: mouth usually closed.	High	If open, mouth to be closed otherwise, overwash to be prevented if necessary as shown in Map 12 K.	High	
Ross' Creek: mouth usually closed.	Medium	Raise barrier to prevent overwash.	High	Should oil enter the estuary, the DEA On-Scene Co-ordinator should be advised immediately and clean-up should only be undertaken under supervision of the DEA Shore Controller.
Ncera River: mouth usually closed.	High	If open, mouth to be closed otherwise, overwash to be prevented if necessary as shown in Map 12 L.	High	
Mlele River: mouth usually closed. Palm Springs Resort.	High	If open, mouth to be closed otherwise, overwash to be prevented if necessary as	High	Should oil enter the estuary, the DEA On-Scene Co-ordinator should be advised immediately and clean-up should only be undertaken under

SITE: Responsible Authority Pertinent Detail	PROTECTION Priority Rating	 Action	CLEAN-UP Priority Rating	 Action
		shown in Map 12 M.		supervision of the DEA Shore Controller.
Kidds Beach: Rocky shoreline			Medium	Rocky areas to be cleaned of medium to heavy deposits of oil. Amenity area to be cleaned at all times.
Mcantsi River: mouth usually closed.	High	If open, mouth to be closed otherwise, overwash to be prevented if necessary as shown in Map 12 N.	High	Should oil enter the estuary, the DEA On-Scene Co-ordinator should be advised immediately and clean-up should only be undertaken under supervision of the DEA Shore Controller.
Tidal Pool	High	Protect with sandbags if possible.	High	Tidal pool to be cleaned using high pressure seawater jets and oil to be collected and removed using skimmers and/or sorbent materials.
Kidds Beach to Buffalo River: Sandy beaches and wavecut rocky platforms.			Medium	Beaches and rocky areas to be cleaned of medium to heavy deposits of oil.
Amenity beach at Winterstrand and Shelley Beach.			High	Amenity beaches to be cleaned all year round.
Gxulu River: mouth usually closed.	High	If open, mouth to be closed otherwise, overwash to be prevented if necessary as shown in Map 12 O.	High	Should oil enter the estuary, the DEA On-Scene Co-ordinator should be advised immediately and clean-up should only be undertaken under supervision of the DEA Shore Controller.

SITE: Responsible Authority Pertinent Detail	PROTECTION Priority Rating	 Action	CLEAN-UP Priority Rating	 Action
Goda River: mouth usually closed.	High	If open, mouth to be closed otherwise, overwash to be prevented if necessary as shown in Map 12 P.	High	Should oil enter the estuary, the DEA On-Scene Co-ordinator should be advised immediately and clean-up should only be undertaken under supervision of the DEA Shore Controller.
Hlozi river: mouth usually closed.	High	If open, mouth to be closed otherwise, overwash to be prevented if necessary as shown in Map 12 Q.	High	Should oil enter the estuary, the DEA On-Scene Co-ordinator should be advised immediately and clean-up should only be undertaken under supervision of the DEA Shore Controller.
Hickmans River: mouth usually closed.	High	If open, mouth to be closed otherwise, overwash to be prevented if necessary as shown in Map 12 R.	High	Should oil enter the estuary, the DEA On-Scene Co-ordinator should be advised immediately and clean-up should only be undertaken under supervision of the DEA Shore Controller.
West Bank: seawater intake for municipal dilution of sewage and for IDZ mariculture facility. New intake for IDZ under construction.	High	Advise Municipality to close seawater intake. Advise Pure Ocean and Espadon Marine fish farms.		

SITE: Responsible Authority Pertinent Detail	PROTECTION Priority Rating	 Action	CLEAN-UP Priority Rating	 Action
C: BUFFALO RIVER **PORT OF EAST LONDON** **TNPA** Buffalo River: mouth stabilised by two breakwaters and kept open by dredging. Harbour for ocean going vessels, fishing boats and yachts.	High	Mouth cannot be closed. TNPA to implement their Oil Spill Contingency Plan. See Map 12 S.	High	Should oil enter the estuary upstream of the Port, the DEA On-Scene Co-ordinator should be advised immediately and clean-up should only be undertaken under supervision of the DEA Shore Controller.
D: BUFFALO RIVER TO KWELERA RIVER Buffalo City Municipality Includes Coastal Forest Reserve which is administered by ECPTA **Buffalo River to Nahoon River:** Sandy beaches and rocky coastline. Amenity beaches at Orient, Eastern and Nahoon Beach. Seawater intake for Aquarium. Blind River at Eastern Beach.	 High High	 Alert Aquarium to close seawater intake. If necessary, raise barrier to prevent overwash.	 High High	Eastern Cape Parks and Tourism Agency to be consulted with regard to clean-up in Coastal Forest Reserves. Amenity beaches and rocky areas to be cleaned all year round. Should oil enter the estuary, the DEA On-Scene Co-ordinator should be advised immediately and clean-up should only be undertaken under supervision of the DEA Shore Controller.

SITE: Responsible Authority Pertinent Detail	PROTECTION Priority Rating	 Action	CLEAN-UP Priority Rating	 Action
Tidal pools at Leaches Bay and Rifle Range.	High	Tidal pools to be protected by raising walls with sandbags if possible.	High	Tidal pools to be cleaned using high pressure seawater jets and oil to be collected and removed using skimmers and/or sorbent materials.
Nhlanza (Ihlanza) River: mouth usually closed.	High	If open, mouth to be closed otherwise, overwash to be prevented if necessary.	High	Should oil enter the estuary, the DEA On-Scene Co-ordinator should be advised immediately and clean-up should only be undertaken under supervision of the DEA Shore Controller.
Nahoon River: mouth usually open, estuary used as a skiboat base and for extensive recreation. Rich in bird life, bait organisms and fish. White Mangrove stands.	High	Mouth to be protected as shown in Map 12 T.	High	Should oil enter the estuary, the DEA On-Scene Co-ordinator should be advised immediately and clean-up should only be undertaken under supervision of the DEA Shore Controller.
Nahoon River To Quinira River: Sandy amenity beach and rocky coastline.			High	Amenity beach to be cleaned all year round. Other areas to be cleaned of medium to heavy deposits of oil.
Quinira River: mouth usually closed.	High	If open, mouth to be closed otherwise, overwash to be prevented if necessary as shown in Map 12 U.	High	Should oil enter the estuary, the DEA On-Scene Co-ordinator should be advised immediately and clean-up should only be undertaken under supervision of the DEA Shore Controller.
Quinira River to Gonubie: Wavecut rocky platforms.			Medium	Shoreline to be cleaned of medium and heavy deposits of oil. Light deposits should be left to natural cleaning.
Rocky and sandy amenity beaches at Gonubie.			High	Amenity beaches to be cleaned all year round.

SITE: Responsible Authority Pertinent Detail	PROTECTION Priority Rating	 Action	CLEAN-UP Priority Rating	 Action
Tidal pool at Gonubie.	High	If possible, protect tidal pool by placing sand bags on the walls.	High	Tidal pool to be cleaned using high pressure seawater jets. Oil to be collected and removed using skimmers and/or sorbent materials.
Gonubie River: mouth usually open and would be difficult to close. Deep channel adjacent to northern bank. Used extensively for recreation and rich in bird life. White Mangrove stands.	High	Mouth to be protected as shown in Map 12 V.	High	Should oil enter the river, the DEA Shore Controller must be advised and clean-up should only be undertaken under supervision.
Gonubie to Kwelera River: This area includes private farmland and unallocated State Land. Mainly rocky shoreline with small sandy beaches.			Medium	Beaches and shoreline to be cleaned of medium to heavy deposits of oil.
Kwelera River: mouth usually open. White Mangrove stands.	High	If possible, mouth to be protected as shown in Map 12 W.	High	Should oil enter the river, the DEA Shore Controller must be advised and clean up should only be undertaken under supervision.
E: KWELERA TO GREAT KEI RIVER Great Kei Municipality assisted by + Amathole District Municipality: Includes Coastal Forest Reserve which is administered by ECPTA **Kwelera to Haga Haga:**				Eastern Cape Parks and Tourism Agency to be consulted with regard to clean-up in Coastal Forest Reserves.
Amenity beaches at Glengariff, Krauses Beach, Cintsa, Cefane, and Cape Henderson.			High	Amenity beaches to be cleaned all year round.
Bulura River: mouth rocky and although open in the past, now closed since drought. Estuary rich in bird life.	High	Mouth cannot be closed if river is in full flow. Sea Map 12 X for protection measures.	High	Should oil enter the river the DEA Shore Controller must be advised and clean up should only be undertaken under supervision.

SITE: Responsible Authority Pertinent Detail	PROTECTION Priority Rating	 Action	CLEAN-UP Priority Rating	 Action
Cunge/Nyama River: mouth opens after heavy rains.	Medium	In the event of high spring tides, raise barrier to prevent overwash.	High	Should oil enter the river the DEA Shore Controller must be advised and clean up should only be undertaken under supervision.
Cintsa River: mouth usually closed. High recreational usage. Caravan park on northern bank.	High	If open, mouth to be closed otherwise, overwash to be prevented if necessary as shown in Map 12 Y.	High	Should oil enter the river the DEA Shore Controller must be advised and clean up should only be undertaken under supervisi
Cefane River: mouth usually closed. High recreational usage. Caravan park on southern bank.	High	If open, mouth to be closed otherwise, overwash to be prevented if necessary as shown in Map 12 Z.	High	Should oil enter the river the DEA Shore Controller must be advised and clean up should only be undertaken under supervision.
Kwenura River: mouth usually closed. Permission from farmer required for access.	High	If open, mouth to be closed otherwise, overwash to be prevented if necessary as shown in Map 12 ZA.	High	Should oil enter the river the DEA Shore Controller must be advised and clean up should only be undertaken under supervision.
Nyara River: mouth usually closed. Caravan park on northern bank,	High	If open, mouth to be closed otherwise, overwash to be prevented if necessary as shown in Map 12 ZB.	High	Should oil enter the river the DEA Shore Controller must be advised and clean up should only be undertaken under supervision.
Haga Haga:				
Amenity sandy and rocky beaches.			High	Amenity beaches to be cleaned all year round. Other areas to be cleaned of medium to heavy deposits of oil.
Haga Haga River: mouth usually closed. Recreational area, with holiday cottages around the lagoon.	High	If open, mouth to be closed otherwise, overwash to be prevented if necessary as shown in Map 12 ZC.	High	Should oil enter the river the DEA Shore Controller must be advised and clean up should only be undertaken under supervision.

SITE: Responsible Authority Pertinent Detail	PROTECTION Priority Rating	 Action	CLEAN-UP Priority Rating	 Action
Haga Haga to Morgans Bay: Rocky coastline with small sandy beaches, limited access. Seawater intake at Marsh Strand for Wild Coast Abalone. Mtendwe River Mouth usually closed. Quko River: mouth usually closed. Caravan Park on northern bank.	 High Medium High	 Notify owners to close seawater intake. In the event of high spring tides, raise barrier to prevent overwash. If open, mouth to be closed otherwise, overwash to be prevented if necessary as shown in Map 12 ZD.	 Medium High High	 Beaches to be left to natural cleaning unless there are medium to heavy deposits of oil that can be refloated and move towards estuaries. Should oil enter the river the DEA Shore Controller must be advised and clean up should only be undertaken under supervision. Should oil enter the river the DEA Shore Controller must be advised and clean up should only be undertaken under supervision.
Morgans Bay: Sandy amenity beaches and rocky coastline. White breasted cormorants breeding on cliffs. Morgan River: blind lagoon	 High	 If open, mouth to be closed otherwise, overwash to be prevented if necessary as shown in Map 12 ZE.	 High High	 Amenity beaches to be cleaned all year round. Other areas to be cleaned of medium to heavy deposits of oil. Should oil enter the river the DEA Shore Controller must be advised and clean up should only be undertaken under supervision.
Morgans Bay to Cwili River: Sandy beaches and rocky shoreline.			 High Medium	 Amenity beaches to be cleaned all year round. Other areas to be cleaned of medium to heavy deposits of oil.
Cwili River to Kei Mouth:				

SITE: Responsible Authority Pertinent Detail	PROTECTION Priority Rating	 Action	CLEAN-UP Priority Rating	 Action
Cwili River: mouth usually closed.	High	If open, mouth to be closed otherwise, overwash to be prevented if necessary as shown in Map 12 ZF.	High	Should oil enter the river the DEA Shore Controller must be advised and clean up should only be undertaken under supervision.
Sandy amenity beaches and rocky shoreline.			High	Amenity beaches to be cleaned all year round. Other areas to be cleaned of medium to heavy deposits of oil.
Great Kei River: mouth generally open and cannot be closed. Strong tidal exchange and extensive marsh area. White Mangrove stands. Holiday resort on southern bank.	High	Protection measures to be implemented under low flow conditions as shown on Map 12 ZG.	High	Should oil enter the river the DEA Shore Controller must be advised and clean up should only be undertaken under supervision.

MAP 12 A **OLD WOMAN'S RIVER**

MOUTH CONDITIONS

This river mouth is usually closed, but after heavy rains can open from time to time. At high spring tides, water may enter the lagoon from the sea and a barrier would need to be constructed to prevent overwash. There is good access.

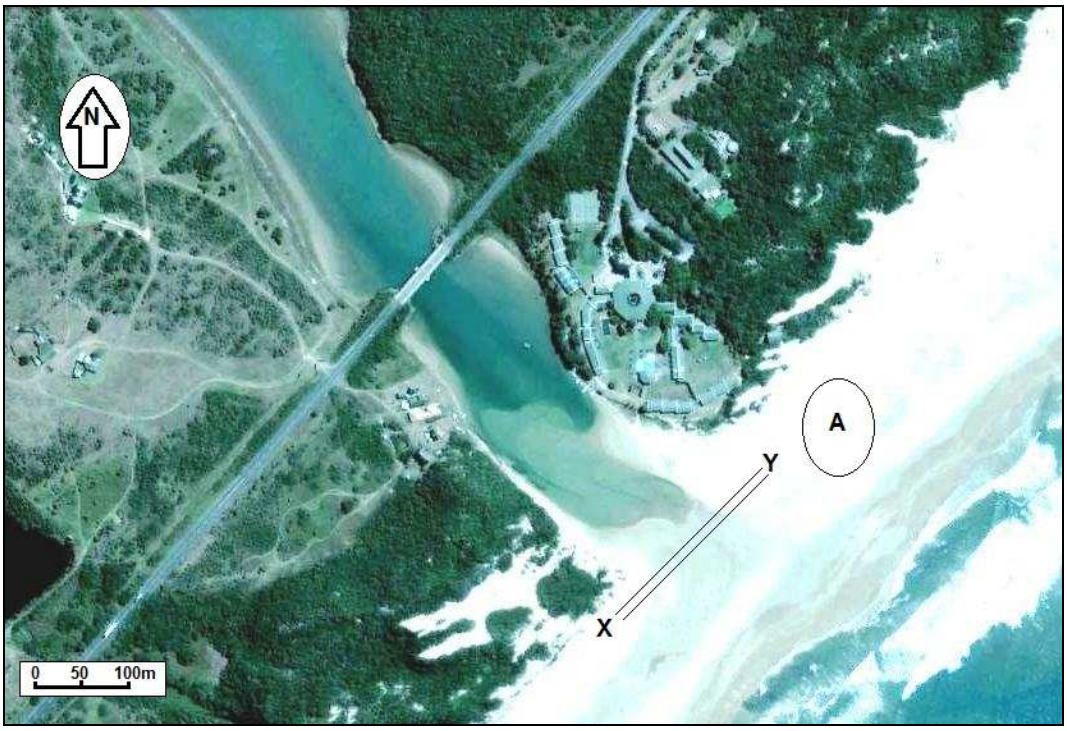
PROTECTION MEASURES

Sand should be moved to raise the barrier across the mouth at AB, using a front end loader. Care should be taken to ensure that vegetated dunes are not disturbed. During periods of high flow, it may be necessary to install overflow pipes just above the high water level. While the barrier is in position, it is to be inspected regularly, with any repairs being effected immediately.

RESPONSE TIME

The barrier should be completed within 4 ½ hours, to prevent the construction work being swamped by the rising tide. It is estimated that one bulldozer or front end loader will be sufficient to complete the task within this period.

MAP 12 B **MPEKWENI RIVER**



MOUTH CONDITIONS

This river mouth is usually closed, but it may open after heavy rains inland and overwash may occur during high spring tides. There is good access. There is a popular hotel resort on the eastern bank. At high spring tides, water enters the lagoon from the sea and a barrier would need to be constructed to prevent overwash.

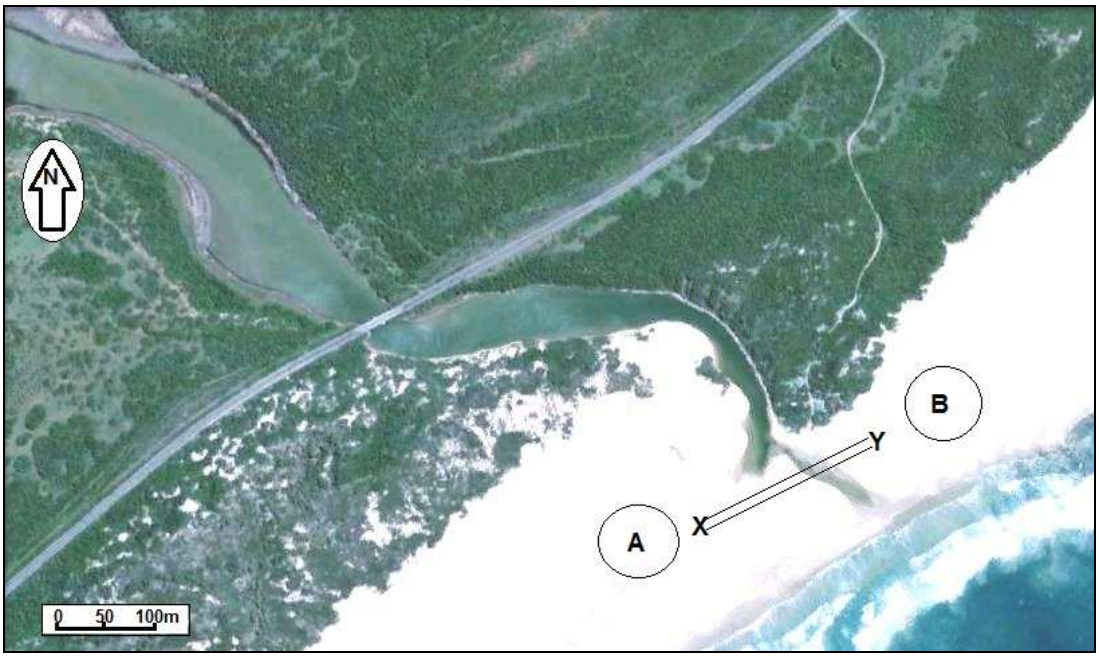
PROTECTION MEASURES

Sand from area A should be moved to raise the barrier across the mouth at XY, using a front end loader. Care should be taken to ensure that vegetated dunes are not disturbed. During periods of high flow, it may be necessary to install overflow pipes just above the high water level. While the barrier is in position, it is to be inspected regularly, with any repairs being effected immediately.

RESPONSE TIME

The barrier should be completed within 4 ½ hours, to prevent the construction work being swamped by the rising tide. It is estimated that one bulldozer or front end loader will be sufficient to complete the task within this period.

MAP 12 C **MTATA RIVER**



MOUTH CONDITIONS

This river mouth is usually closed, but it may open after heavy rains inland and overwash may occur during high spring tides. There is good access. At high spring tides, water enters the lagoon from the sea and a barrier would need to be constructed to prevent overwash.

PROTECTION MEASURES

Sand from areas A and B should be moved to raise the barrier across the mouth at XY, using a front end loader. Care should be taken to ensure that vegetated dunes are not disturbed. During periods of high flow, it may be necessary to install overflow pipes just above the high water level. While the barrier is in position, it is to be inspected regularly, with any repairs being effected immediately.

RESPONSE TIME

The barrier should be completed within 4 ½ hours, to prevent the construction work being swamped by the rising tide. It is estimated that one bulldozer or front end loader will be sufficient to complete the task within this period.

MAP 12 D **MGWALANA RIVER**

MOUTH CONDITIONS

This river mouth is usually closed, but it may open after heavy rains inland and overwash may occur during high spring tides. There is good access. There are a number of cottages on the eastern bank. At high spring tides, water enters the lagoon from the sea and a barrier would need to be constructed to prevent overwash.

PROTECTION MEASURES

Sand from areas A and B should be moved to raise the barrier across the mouth at XY, using a front end loader. Care should be taken to ensure that vegetated dunes are not disturbed. During periods of high flow, it may be necessary to install overflow pipes just above the high water level. While the barrier is in position, it is to be inspected regularly, with any repairs being effected immediately.

RESPONSE TIME

The barrier should be completed within 4 ½ hours, to prevent the construction work being swamped by the rising tide. It is estimated that one bulldozer or front end loader will be sufficient to complete the task within this period.

MAP 12 E **BIRA RIVER**

MOUTH CONDITIONS

This river mouth is usually closed, but it may open after heavy rains inland and overwash may occur during high spring tides. There is good access. There are a number of cottages on the eastern bank. At high spring tides, water enters the lagoon from the sea and a barrier would need to be constructed to prevent overwash.

PROTECTION MEASURES

Sand from areas A and B should be moved to raise the barrier across the mouth at XY, using a front end loader. Care should be taken to ensure that vegetated dunes are not disturbed. During periods of high flow, it may be necessary to install overflow pipes just above the high water level. While the barrier is in position, it is to be inspected regularly, with any repairs being effected immediately.

If the mouth cannot be closed, individual salt marshes and tidal flats should be protected using straw bales or shore sealing, flotation booms. Depending on prevailing conditions, an attempt should be made to deploy a floating barrier as close to the mouth as possible in areas of lowest tidal velocities.

RESPONSE TIME

The barrier should be completed within 4 ½ hours, to prevent the construction work being swamped by the rising tide. It is estimated that one bulldozer or front end loader will be sufficient to complete the task within this period.

MAP 12 F **GQUTYWA RIVER**

MOUTH CONDITIONS

This river mouth is usually closed, but it may open after heavy rains inland and overwash may occur during high spring tides. There is limited access. At high spring tides, water may enter the lagoon from the sea and a barrier would need to be constructed to prevent overwash.

PROTECTION MEASURES

Sand from areas A and B should be moved to raise the barrier across the mouth at XY, using a front end loader. Care should be taken to ensure that vegetated dunes are not disturbed. During periods of high flow, it may be necessary to install overflow pipes just above the high water level. While the barrier is in position, it is to be inspected regularly, with any repairs being effected immediately.

RESPONSE TIME

The barrier should be completed within 4 ½ hours, to prevent the construction work being swamped by the rising tide. It is estimated that one bulldozer or front end loader will be sufficient to complete the task within this period.

MAP 12 G **KEISKAMMA RIVER**

MOUTH CONDITIONS

The mouth is usually open, but could probably be closed in times of drought as there are a number of dams upstream. The estuary is tide-dominated and rich in bird life. There are cottages with good access on the southern bank. The oyster beds are marked on the map.

PROTECTION

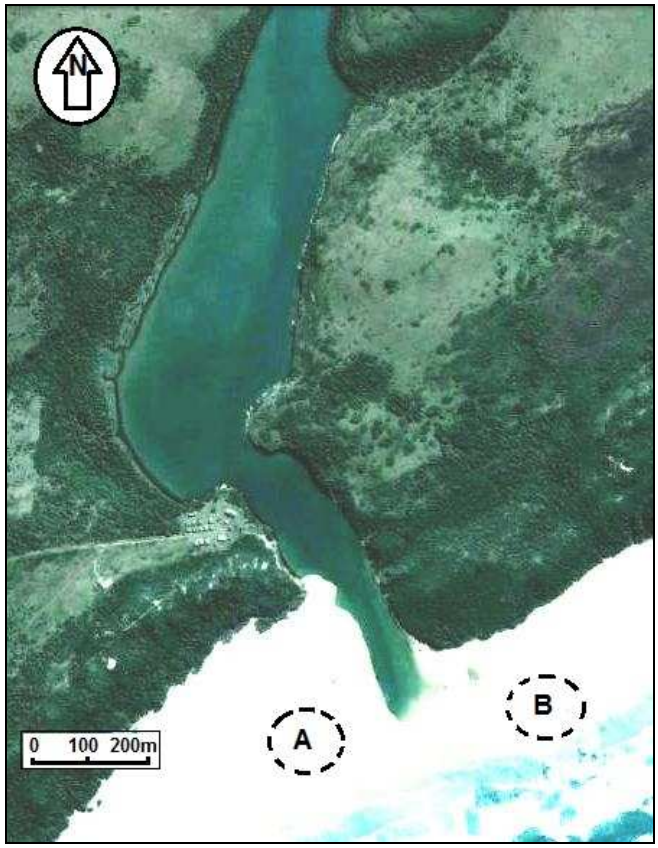
If the mouth is open, or overwash occurs, sand can be moved from areas A and B, using a bulldozer or front-end loader, to raise the barrier or close the inlet at points XXX. During periods of high flow, it may be necessary to install an overflow pipe just above the high water level. Care should be taken not to disturb any vegetated dunes in the area. While the barrier is in position, it is to be inspected regularly, with any repairs being effected immediately.

If the mouth cannot be closed, individual salt marshes and tidal flats should be protected using straw bales or shore sealing, flotation booms. Depending on prevailing conditions, an attempt should be made to deploy a floating barrier as close to the mouth as possible in areas of lowest tidal velocities.

RESPONSE TIME

The barrier should be completed within 4 ½ hours, to prevent the construction work being swamped by the rising tide. It is estimated that one bulldozer or front-end loader will be sufficient to complete the task within this period.

MAP 12 H **KIWANE RIVER**



MOUTH CONDITIONS

The mouth is usually closed. There is good access to the western bank.

PROTECTION

If the mouth is open, or overwash occurs, sand can be moved from areas A and B, using a bulldozer or front-end loader, to raise the barrier or close the inlet. During periods of high flow, it may be necessary to install an overflow pipe just above the high water level. Care should be taken not to disturb any vegetated dunes in the area. While the barrier is in position, it is to be inspected regularly, with any repairs being effected immediately. An alternative would be to construct a straw bale barrier as illustrated at the end of this section.

If the mouth cannot be closed, individual salt marshes and tidal flats should be protected using straw bales or shore sealing, flotation booms. Depending on prevailing conditions, an attempt should be made to deploy a floating barrier as close to the mouth as possible in areas of lowest tidal velocities.

MAP 12 I **TYOLOMNQA (CHULUMNA) RIVER**

MOUTH CONDITIONS

The mouth of this river is usually open and the estuary tidal, and would prove difficult, if not impossible to close, even under favourable conditions. There is good access to the south-western bank.

PROTECTION MEASURES

If possible, the channel should be closed using sand or straw bales at the narrowest point, and the sand barrier raised at the area marked X on the map. If this cannot be achieved, an attempt should be made to deploy a floating barrier as close to the mouth as possible in areas of lowest tidal velocities, and the salt marshes should be protected using straw bales. While the barrier is in position, it is to be inspected regularly, with any repairs being effected immediately. The proposed boom site (EBMO 1986) is marked AB on the map, but the availability of booms is limited at present and would need to be acquired through the DEA.

RESPONSE TIME

The barrier should be completed in 4 1/2 hours, to prevent the construction work being swamped by the rising tide. One bulldozer or front-end loader will be sufficient to complete the task within this period, and it should remain on site to effect repairs until the barrier is stabilised.

MAP 12 J **NEW HOPE RIVER**

MOUTH CONDITIONS

The mouth of this river is usually closed, but it may open after heavy rains inland and overwash may occur during high spring tides. There is good access.

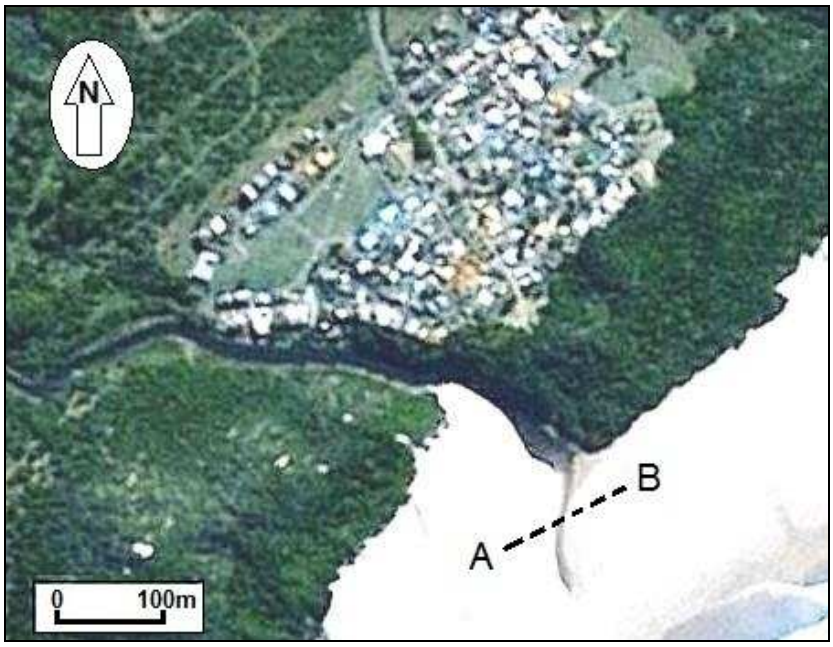
PROTECTION MEASURES

If the mouth is open, or overwash is likely to occur, the barrier should be raised at AB using a bulldozer or front-end loader to push sand into place. Alternatively, straw bales can be used. During periods of high flow, it may be necessary to install an overflow pipe just above the high water level. Care should be taken not to disturb any vegetated dunes in the area. While the barrier is in position, it is to be inspected regularly, with any repairs being effected immediately.

RESPONSE TIME

The barrier should be completed in 4 1/2 hours, to prevent the construction work being swamped by the rising tide. One bulldozer or front-end loader will be sufficient to complete the task within this period, and it should remain on site to effect repairs until the barrier is stabilised.

MAP 12 K **LILYVALE RIVER**



MOUTH CONDITIONS

The mouth of this river is usually closed, but it may open after heavy rains inland and overwash may occur during high spring tides. There is good access.

PROTECTION MEASURES

If the mouth is open, or overwash is likely to occur, sand can be moved across the mouth at AB using a bulldozer or front-end loader. During periods of high flow, it may be necessary to install an overflow pipe just above the high water level. Care should be taken not to disturb any vegetated dunes in the area. While the barrier is in position, it is to be inspected regularly, with any repairs being effected immediately.

RESPONSE TIME

The barrier should be completed in 4 1/2 hours, to prevent the construction work being swamped by the rising tide. One bulldozer or front-end loader will be sufficient to complete the task within this period, and it should remain on site to effect repairs until the barrier is stabilised.

MAP 12 L **NCERA RIVER**

MOUTH CONDITIONS

The mouth of this river is usually closed, but it may open after heavy rains inland and overwash may occur during high spring tides. There is good access.

PROTECTION MEASURES

If the mouth is open, or overwash is likely to occur, sand can be moved across the mouth using a bulldozer or front-end loader. If there is not enough sand available, straw bales should be used. During periods of high flow, it may be necessary to install an overflow pipe just above the high water level. Care should be taken not to disturb any vegetated dunes in the area. While the barrier is in position, it is to be inspected regularly, with any repairs being effected immediately.

If the mouth cannot be closed, individual salt marshes and tidal flats should be protected using straw bales or shore sealing, flotation booms. Depending on prevailing conditions, an attempt should be made to deploy a floating barrier as close to the mouth as possible in areas of lowest tidal velocities.

RESPONSE TIME

The barrier should be completed in 4 1/2 hours, to prevent the construction work being swamped by the rising tide. One bulldozer or front-end loader will be sufficient to complete the task within this period, and it should remain on site to effect repairs until the barrier is stabilised.

MAP 12 M **MLELE RIVER**

MOUTH CONDITIONS

The mouth of this river is usually closed, but it may open after heavy rains inland and overwash may occur during high spring tides. There is limited access.

PROTECTION MEASURES

If the mouth is open, or overwash is likely to occur, sand can be moved across the mouth using a bulldozer or front-end loader. If there is not enough sand available, straw bales should be used. During periods of high flow, it may be necessary to install an overflow pipe just above the high water level. Care should be taken not to disturb any vegetated dunes in the area. While the barrier is in position, it is to be inspected regularly, with any repairs being effected immediately.

RESPONSE TIME

The barrier should be completed in 4 1/2 hours, to prevent the construction work being swamped by the rising tide. One bulldozer or front-end loader will be sufficient to complete the task within this period, and it should remain on site to effect repairs until the barrier is stabilised.

MAP 12 N **MCANTSI RIVER**

MOUTH CONDITIONS

The mouth of this river is usually closed, but it may open after heavy rains inland and overwash may occur during high spring tides. There is good access.

PROTECTION MEASURES

If the mouth is open, or overwash is likely to occur, sand should be moved across the mouth using a bulldozer or front-end loader. Sandbags could be used to prevent overtopping. During periods of high flow, it may be necessary to install an overflow pipe just above the high water level. Care should be taken not to disturb any vegetated dunes in the area. If there is not enough sand available, straw bales should be used. While the barrier is in position, it is to be inspected regularly, with any repairs being effected immediately.

If the mouth cannot be closed, individual salt marshes and tidal flats should be protected using straw bales or shore sealing, flotation booms. Depending on prevailing conditions, an attempt should be made to deploy a floating barrier as close to the mouth as possible in areas of lowest tidal velocities.

RESPONSE TIME

The barrier should be completed in 4 1/2 hours, to prevent the construction work being swamped by the rising tide. One bulldozer or front-end loader will be sufficient to complete the task within this period, and it should remain on site to effect repairs until the barrier is stabilised.

MAP 12 (O) **GXULU RIVER**

MOUTH CONDITIONS

The mouth of this river is usually closed, but it may open after heavy rains inland and overwash may occur during high spring tides. There is good access.

PROTECTION MEASURES

If the mouth is open, or overwash is likely to occur, sand from A or B should be moved across the mouth at position XX, using a bulldozer or front-end loader. During periods of high flow, it may be necessary to install an overflow pipe just above the high water level. Care should be taken not to disturb any vegetated dunes in the area. If there is not enough sand available, straw bales should be used. While the barrier is in position, it is to be inspected regularly, with any repairs being effected immediately.

If the mouth cannot be closed, individual salt marshes and tidal flats should be protected using straw bales or shore sealing, flotation booms. Depending on prevailing conditions, an attempt should be made to deploy a floating barrier as close to the mouth as possible in areas of lowest tidal velocities.

RESPONSE TIME

The barrier should be completed in 4 1/2 hours, to prevent the construction work being swamped by the rising tide. One bulldozer or front-end loader will be sufficient to complete the task within this period, and it should remain on site to effect repairs until the barrier is stabilised.

MAP 12 P **GODA RIVER**

MOUTH CONDITIONS

The mouth of this river is usually closed, but it may open after heavy rains inland and overwash may occur during high spring tides. There is good access.

PROTECTION MEASURES

If the mouth is open, or overwash is likely to occur, sandbags can be placed across the mouth from A to B. During periods of high flow, it may be necessary to install an overflow pipe just above the high water level. Care should be taken not to disturb any vegetated dunes in the area. If there is not enough sand available, straw bales should be used. While the barrier is in position, it is to be inspected regularly, with any repairs being effected immediately.

If the mouth cannot be closed, individual salt marshes and tidal flats should be protected using straw bales or shore sealing, flotation booms. Depending on prevailing conditions, an attempt should be made to deploy a floating barrier as close to the mouth as possible in areas of lowest tidal velocities.

RESPONSE TIME

The barrier should be completed in 4 1/2 hours, to prevent the construction work being swamped by the rising tide. One bulldozer or front-end loader will be sufficient to complete the task within this period, and it should remain on site to effect repairs until the barrier is stabilised.

MAP 12 Q **HLOZI RIVER**

MOUTH CONDITIONS

The mouth of this river is usually closed, but it may open after heavy rains inland and overwash may occur during high spring tides. There is good access.

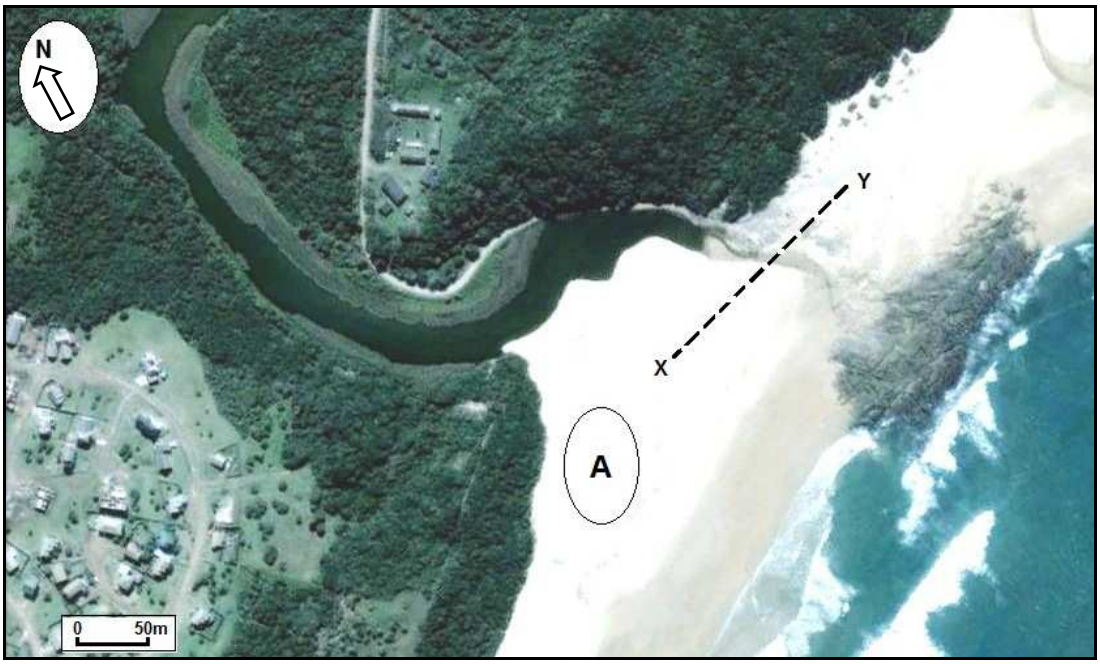
PROTECTION MEASURES

If the mouth is open, or overwash occurs, sand from areas A or B can be moved across the mouth using a bulldozer or front-end loader. Sandbags could be used to prevent overtopping. During periods of high flow, it may be necessary to install an overflow pipe just above the high water level. Care should be taken not to disturb any vegetated dunes in the area. While the barrier is in position, it is to be inspected regularly, with any repairs being effected immediately.

RESPONSE TIME

The barrier should be completed in 4 1/2 hours, to prevent the construction work being swamped by the rising tide. One bulldozer or front-end loader will be sufficient to complete the task within this period, and it should remain on site to effect repairs until the barrier is stabilised.

MAP 12 R **HICKMANS RIVER**



MOUTH CONDITIONS

The mouth of this river is usually closed, but it may open after heavy rains inland and overwash may occur during high spring tides. There is good access.

PROTECTION MEASURES

If the mouth is open, or overwash occurs, sand from A can be moved across the mouth (XY) using a bulldozer or front-end loader. Alternatively, sandbags can be used. During periods of high flow, it may be necessary to install an overflow pipe just above the high water level. Care should be taken not to disturb any vegetated dunes in the area. While the barrier is in position, it is to be inspected regularly, with any repairs being effected immediately.

If the mouth cannot be closed, individual salt marshes and tidal flats should be protected using straw bales or shore sealing, flotation booms. Depending on prevailing conditions, an attempt should be made to deploy a floating barrier as close to the mouth as possible in areas of lowest tidal velocities.

RESPONSE TIME

The barrier should be completed in 4 1/2 hours, to prevent the construction work being swamped by the rising tide. One bulldozer or front-end loader will be sufficient to complete the task within this period, and it should remain on site to effect repairs until the barrier is stabilised.

MAP 12 S **BUFFALO RIVER**

A Tier 1 oil spill occurring within the Port of East London and approaches will be dealt with in accordance with the TNPA Oil Spill Contingency Plan for Port of East London. The Port Plan lists the actions that are to be taken and the Port has equipment in the form of booms, skimmers etc to initiate clean-up. If the response is beyond the capability of the Port, a Tier 2 or Tier 3 response will be initiated through SAMSA and DEA. TNPA requires that all persons within a port must take all reasonable steps to prevent, minimise, mitigate and combat any oil pollution or damage to the environment.

MAP 12 T **NAHOON RIVER**

MOUTH CONDITIONS

The mouth is usually open, fast flowing, and varies in depth depending on silting up of the river (at present it is waist deep at low tide). It will be impossible to close. There is good access.

PROTECTION MEASURES

As the mouth cannot be closed, individual salt marshes and tidal flats should be protected using straw bales or booms wherever possible. The proposed boom site to prevent penetration of any oil upstream (EBMO 1986) is marked ABC on the map but the availability of booms at present is limited. Depending on prevailing conditions, an attempt should be made to deploy a floating barrier as close to the mouth as possible in areas of lowest tidal velocities.

MAP 12 U **QUINERA RIVER**

MOUTH CONDITIONS

The mouth of this river is usually closed, but it may open after heavy rains inland and overwash may occur during high spring tides. There is good access.

PROTECTION MEASURES

If the mouth is open, or overwash occurs, sand from A can be moved across the mouth, to raise the barrier at XX using a bulldozer or front-end loader. Alternatively, sandbags can be used. During periods of high flow, it may be necessary to install an overflow pipe just above the high water level. Care should be taken not to disturb any vegetated dunes in the area. While the barrier is in position, it is to be inspected regularly, with any repairs being effected immediately.

If the mouth cannot be closed, individual salt marshes and tidal flats should be protected using straw bales or shore sealing, flotation booms. Depending on prevailing conditions, an attempt should be made to deploy a floating barrier as close to the mouth as possible in areas of lowest tidal velocities.

RESPONSE TIME

The barrier should be completed in 4 1/2 hours to prevent the construction work being swamped by the rising tide. One bulldozer or front-end loader will be sufficient to complete the task within this period, and it should remain on site to effect repairs until the barrier is stabilised.

MAP 12 V **GONUBIE RIVER**

MOUTH CONDITIONS

The mouth of this river is usually open and would be difficult, if not impossible to close as there is a deep channel adjacent to the rocks on the northern bank. There is good access.

PROTECTION MEASURES

Sand should be moved from A to B using a bulldozer to build up a barrier to prevent overwash. Care should be taken not to disturb any vegetated dunes in the area. Storms recently removed a lot of sand from the beach, and if there is not enough sand available to raise the barrier, straw bales will need to be used. While the barrier is in position, it is to be inspected regularly, with any repairs being effected immediately.

Depending on prevailing conditions, it may be feasible to deploy a floating barrier, or shore sealing boom, at XY and to collect deflected oil at X, otherwise individual salt marshes and tidal flats should be protected using straw bales or booms.

RESPONSE TIME

The barrier should be completed in 4 1/2 hours, to prevent the construction work being swamped by the rising tide. One bulldozer or front-end loader will be sufficient to complete the task within this period, and it should remain on site to effect repairs until the barrier is stabilized.

MAP 12 W **KWELERA RIVER**

MOUTH CONDITIONS

The mouth of this river is usually open and it will not be possible to close the mouth except, perhaps, during time of drought. There is good access.

PROTECTION MEASURES

A barrier of sand/sandbags should be built in the vicinity of XX to prevent overwash. Securely staked straw bales should be used if there is not enough sand available. Care should be taken not to disturb any vegetated dunes in the area.

Depending on prevailing conditions, an attempt should be made to deploy a floating barrier as close to the mouth as possible, in areas of lowest tidal velocities to deflect the oil onto adjacent banks from where it can be collected. If this is not feasible, individual salt marshes and tidal flats should be protected using straw bales or booms. The proposed boom site (EBMO 1986) is marked AB on the map, but the availability of booms in the area is limited at present.

RESPONSE TIME

The barrier should be completed in 4 1/2 hours, to prevent the construction work being swamped by the rising tide. One bulldozer or front-end loader will be sufficient to complete the task within this period, and it should remain on site to effect repairs until the barrier is stabilised.

MAP 12 X **BULURA RIVER**

MOUTH CONDITIONS

The mouth of this river is rocky, usually open and would be difficult if not impossible to close when it is in full flow. However, since the recent drought (2009) the mouth has been closed. There is good access.

PROTECTION MEASURES

If the mouth is closed, the barrier should be raised to prevent overtopping during high tides. If open, a bulldozer should be used to raise the barrier at XX. If there is not enough sand available, straw bales should be used.

Depending on prevailing conditions, an attempt should be made to deploy a floating barrier in the vicinity of AB, where tidal velocities are lowest, to deflect oil onto the adjacent bank, where it can be collected. If the mouth cannot be closed, individual salt marshes and tidal flats should be protected using a straw bale barrier or booms if available.

RESPONSE TIME

The barriers should be completed in 4 1/2 hour, to prevent the construction work being swamped by the rising tide.

MAP 12 Y **CINTSA RIVER**

MOUTH CONDITIONS

The mouth of this river is usually closed, but it may open after heavy rains inland and overwash may occur during high spring tides. There is good access.

PROTECTION MEASURES

If the mouth is open, or overwash occurs, sand from A can be moved across the mouth using a bulldozer or front-end loader. During periods of high flow, it may be necessary to install an overflow pipe just above the high water level. Care should be taken not to disturb any vegetated dunes in the area. While the barrier is in position, it is to be inspected regularly, with any repairs being effected immediately.

If the mouth cannot be closed, individual salt marshes and tidal flats should be protected using straw bales or shore sealing, flotation booms. Depending on prevailing conditions, an attempt should be made to deploy a floating barrier as close to the mouth as possible in areas of lowest tidal velocities.

RESPONSE TIME

The barrier should be completed in 4 1/2 hours, to prevent the construction work being swamped by the rising tide. One bulldozer or front-end loader will be sufficient to complete the task within this period, and it should remain on site to effect repairs until the barrier is stabilised.

MAP 12 Z **CEFANE RIVER**

MOUTH CONDITIONS

The mouth of this river is usually closed, but it may open after heavy rains inland and overwash may occur during high spring tides. There is good access.

PROTECTION MEASURES

If the mouth is open, or overwash occurs, sand from A or B can be moved across the mouth to raise the barrier at XX, using a bulldozer or front-end loader. Alternatively, sandbags or straw bales could be used. During periods of high flow, it may be necessary to install an overflow pipe just above the high water level. Care should be taken not to disturb any vegetated dunes in the area. While the barrier is in position, it is to be inspected regularly, with any repairs being effected immediately.

If the mouth cannot be closed, individual salt marshes and tidal flats should be protected using straw bales or shore sealing, flotation booms. Depending on prevailing conditions, an attempt should be made to deploy a floating barrier as close to the mouth as possible in areas of lowest tidal velocities.

RESPONSE TIME

The barrier should be completed in 4 1/2 hours, to prevent the construction work being swamped by the rising tide. One bulldozer or front-end loader will be sufficient to complete the task within this period, and it should remain on site to effect repairs until the barrier is stabilised.

MAP 12 ZA **KWENURA RIVER**

MOUTH CONDITIONS

The mouth of this river is usually closed, but it may open after heavy rains inland and overwash may occur during high spring tides. There is limited access, either along the beach from Cefani using a four-wheel drive vehicle, or by obtaining permission from the farmer on the northern bank.

PROTECTION MEASURES

If the mouth is open, or overwash occurs, sand can be moved across the mouth at XX using a bulldozer or front-end loader. Alternatively, sandbags or straw bales could be used. During periods of high flow, it may be necessary to install an overflow pipe just above the high water level. Care should be taken not to disturb any vegetated dunes in the area. While the barrier is in position, it is to be inspected regularly, with any repairs being effected immediately.

If the mouth cannot be closed, individual salt marshes and tidal flats should be protected using straw bales or shore sealing, flotation booms. Depending on prevailing conditions, an attempt should be made to deploy a floating barrier as close to the mouth as possible in areas of lowest tidal velocities.

RESPONSE TIME

The barrier should be completed in 4 1/2 hours, to prevent the construction work being swamped by the rising tide. One bulldozer or front-end loader will be sufficient to complete the task within this period, and it should remain on site to effect repairs until the barrier is stabilised.

MAP 12 ZB **NYARA RIVER**

MOUTH CONDITIONS

The mouth of this river is usually closed, but it may open after heavy rains inland and overwash may occur during high spring tides. There is limited access.

PROTECTION MEASURES

If the mouth is open, or overwash occurs, sand can be moved across the mouth at XXX, using a bulldozer or front-end loader. Alternatively, sandbags or straw bales can be used. During periods of high flow, it may be necessary to install an overflow pipe just above the high water level. Care should be taken not to disturb any vegetated dunes in the area. While the barrier is in position, it is to be inspected regularly, with any repairs being effected immediately.

If the mouth cannot be closed, individual salt marshes and tidal flats should be protected using straw bales or shore sealing, flotation booms. Depending on prevailing conditions, an attempt should be made to deploy a floating barrier as close to the mouth as possible in areas of lowest tidal velocities.

RESPONSE TIME

The barrier should be completed in 4 1/2 hours, to prevent the construction work being swamped by the rising tide. One bulldozer or front-end loader will be sufficient to complete the task within this period, and it should remain on site to effect repairs until the barrier is stabilised.

MAP 12 ZC **HAGA HAGA RIVER**

MOUTH CONDITIONS

The mouth of this river is usually closed, but it may open after heavy rains inland and overwash may occur during high spring tides. There is good access.

PROTECTION MEASURES

If the mouth is open, or overwash occurs, sand can be moved across the mouth at XXX, using a bulldozer or front-end loader. Alternatively, sandbags or straw bales can be used. During periods of high flow, it may be necessary to install an overflow pipe just above the high water level. Care should be taken not to disturb any vegetated dunes in the area. While the barrier is in position, it is to be inspected regularly, with any repairs being effected immediately.

If the mouth cannot be closed, individual salt marshes and tidal flats should be protected using straw bales or shore sealing, flotation booms. Depending on prevailing conditions, an attempt should be made to deploy a floating barrier as close to the mouth as possible in areas of lowest tidal velocities.

RESPONSE TIME

The barrier should be completed in 4 1/2 hours, to prevent the construction work being swamped by the rising tide. One bulldozer or front-end loader will be sufficient to complete the task within this period and it should remain on site to effect repairs until the barrier is stabilised.

MAP 12 ZD **QUKO RIVER**

MOUTH CONDITIONS

The mouth of this river is usually open, forming a deep, narrow channel on the eastern bank. Overwash may occur over a wide area during high tide. There is limited access.

PROTECTION MEASURES

A sand/sandbag/straw bale barrier should be constructed at XX to prevent overwash. Depending on prevailing conditions it may be feasible to deploy a short, floating barrier in the vicinity of AB to deflect incoming oil onto the beach where it can then be collected. Otherwise, individual marshes should be protected using straw bales or booms. Care should be taken not to disturb any vegetated dunes in the area. While the barrier is in position, it is to be inspected regularly, with any repairs being effected immediately.

RESPONSE TIME

The barrier should be completed in 4 1/2 hours, to prevent the construction work being swamped by the rising tide.

MAP 12 ZE **MORGAN RIVER**

MOUTH CONDITIONS

The mouth of this river is usually closed, but it may open after heavy rains inland and overwash may occur during high spring tides. There is good access.

PROTECTION MEASURES

If the mouth is open, or overwash occurs, sand can be moved across the mouth at XX using a bulldozer or front-end loader. Alternatively, sandbags or straw bales can be used to raise the barrier. During periods of high flow, it may be necessary to install an overflow pipe just above the high water level. Care should be taken not to disturb any vegetated dunes in the area. While the barrier is in position, it is to be inspected regularly, with any repairs being effected immediately.

If the mouth cannot be closed, individual salt marshes and tidal flats should be protected using straw bales or shore sealing, flotation booms. Depending on prevailing conditions, an attempt should be made to deploy a floating barrier as close to the mouth as possible in areas of lowest tidal velocities.

RESPONSE TIME

The barrier should be completed in 4 1/2 hours, to prevent the construction work being swamped by the rising tide. One bulldozer or front-end loader will be sufficient to complete the task within this period, and it should remain on site to effect repairs until the barrier is stabilised.

MAP 12 ZF **CWILI RIVER**

MOUTH CONDITIONS

The mouth of this river is usually closed, but it may open after heavy rains inland and overwash may occur during high spring tides. There is good access.

PROTECTION MEASURES

If the mouth is open, or overwash occurs, sand from A can be moved across the mouth (XX) using a bulldozer or front-end loader. Alternatively, sandbags or straw bales can be used. During periods of high flow, it may be necessary to install an overflow pipe just above the high water level. While the barrier is in position, it is to be inspected regularly, with any repairs being effected immediately.

RESPONSE TIME

The barrier should be completed in 4 1/2 hours, to prevent the construction work being swamped by the rising tide. One bulldozer or front-end loader will be sufficient to complete the task within this period. and it should remain on site to effect repairs until the barrier is stabilised.

MAP 12 ZG **GREAT KEI RIVER**

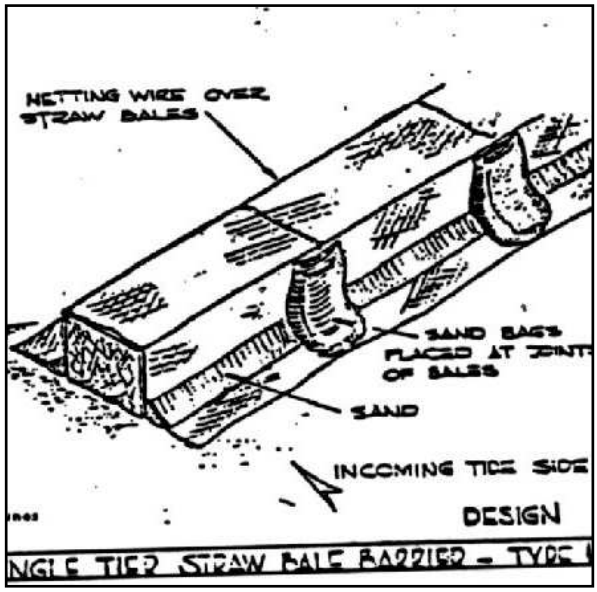
MOUTH CONDITIONS

The mouth is generally open and could not be artificially closed.. There is good tidal exchange and there are fairly extensive salt marshes on the Transkei side of the river.

PROTECTION MEASURES

A barrier should be constructed either with sand or straw bales to protect the area XX on the map. Individual salt marshes and tidal flats should be protected using booms, straw bales or sandbag barriers. Depending on prevailing conditions, it may be feasible to deploy a boom or floating barrier at XYZ to deflect oil onto the bank but this could prove to be difficult.

DIAGRAMS ILLUSTRATING CONSTRUCTION OF STRAW BARRIERS, (EBMO).

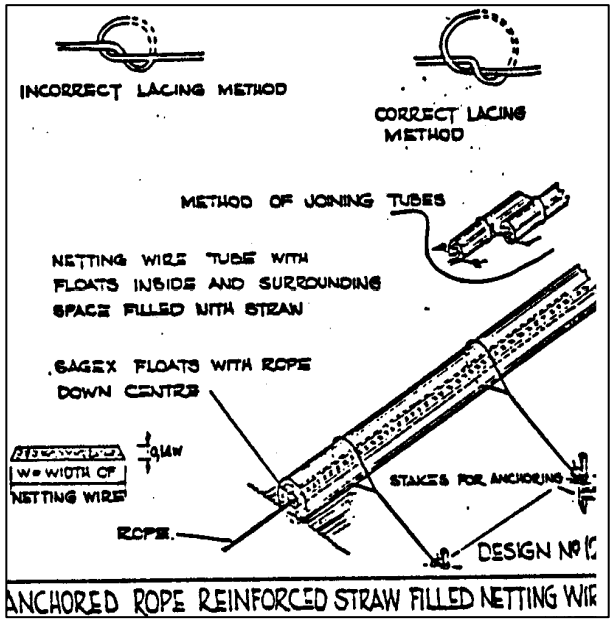


CONSTRUCTION OF STRAW BALE BARRIER

Lay straw bales tightly end to end, commencing at the middle of the barrier and working outwards. Starting at one end, unroll 1.8m wide 50mm mesh wire netting along the length of the barrier. If more than one roll of wire netting is required, provide a 1m overlap. Form wire netting around bales as in sketch. Place bags filled with sand on the wire netting, on either side of the barrier where the straw bales abut and as close to the bales as possible. The bags can be of plastic or hessian, and can be completely filled. The sand for filling them must not be obtained from vegetated sand dunes

ASSEMBLY OF STRAW FILLED NETTING WIRE TUBE BARRIER

Roll out 50m of 1.8m wide 50mm mesh netting wire. Place bales of straw at 1.3m spacing on netting wire. Roll out 60m of 20mm diameter rope and thread purse seine net floats on rope for 40m. Starting at centre of barrier and working outwards, cut first bale of straw open and spread it to cover the full width of netting wire and 1.3m along its length. Similarly cut open a further two bales of straw on either side, and spread straw. Place rope with floatation attached on top of pile of straw. At centre bring edges of netting wire together, ensuring that the floatation is in the centre of the tube and lace with 2mm cordage using the correct lacing method. A netting needle (tatting shuttle) made from a piece of box wood will make lacing easier. Continue as before and when ends are reached, lace them closed. If correctly packed, barrier will be about 40m long. The sequence of operations is suggested to limit the amount of straw that may be blown away by the wind, if present.



ERECTION OF BARRIER

Select end anchor points for the barrier and drive in a stake until really firm, on or above the high water overwash line, and make each end of the anchor rope of the barrier fast to these stakes, allowing a small amount of slack (to limit excessive tension). If barrier does not span the distance between the high water overwash lines on each bank, a mound of sand can be shovelled into position to prevent water washing around the ends of the barrier. The barrier is to be continually inspected and any repairs needed, to be effected immediately.

11. WASTE MANAGEMENT

During the clean-up process, large amounts of oily waste will be generated. Methods for the collection, transportation and temporary storage of this oil can be found in Addendum C. Decisions regarding the final disposal of this oil will be made by the Department of Environmental Affairs: Pollution and Waste Management, and the DEA Shore Controller.

Waste management will need to take into account various streams of oily water and solid waste. Waste contractors will be required to deal with waste requiring special disposal. Arrangements need to be made ahead of time with contractors, to establish their suitability and capabilities for removing oily waste in an environmentally acceptable manner. Response teams need to be fully briefed on how to deal with different types of oily waste. Specially marked, separate containers/skips for oily waste separation and removal need to be provided.

There is no hazardous waste disposal site in the Amathole region, and such waste is at present sent to Port Elizabeth for disposal. The Buffalo City Municipality has a domestic refuse site known as the Round Hill site, near Berlin. This site may be able to accommodate low grade oily waste, such as oily sand, but DEDEA needs to be consulted regarding compliance in terms of permit conditions.

Various contractors involved in the recycling of liquid waste oil, have facilities to collect waste oil from the East London area, for transportation to processing plants elsewhere. Fuel Firing Services is involved in the recycling of liquid waste oil. There is a waste oil collection depot at Port Elizabeth where oil storage tanks are available for storing collected oil. It should be noted that there are limitations associated with contamination of the oil by sand and seawater. The ROSE Foundation can assist with the co-ordination of recycling of waste oil. Contact details are provided at the end of Section 13.

12. EQUIPMENT - MATERIAL – MANPOWER

12.1 DEPARTMENTAL EQUIPMENT

The Department of Environmental Affairs manages the national equipment stocks for the combating of oil pollution. This equipment consists of:

- K9 surveillance aircraft on contract
- inshore patrol vessels fitted with dispersant spraying equipment and breaker nets (managed by DAFF)
- an offshore patrol vessel equipped with dispersant tanks (managed by DAFF)
- Seaguardian and Shoreguardian booms, a Portboom and Riverboom
- Skimmers
- Floating tank and fast tanks
- Inflatable boat
- Drum vacuum unit
- High pressure water washer

This equipment is held at Paarden Island in Cape Town but can be mobilized at short notice.
A full list of equipment is provided in Appendix IV.

12.2 TRANSNET NATIONAL PORTS AUTHORITY EQUIPMENT

The TNPA has oil pollution equipment stocks at all the major ports. This includes booms, skimmers, storage tanks etc. This equipment can be commissioned during emergency situations. The nearest Harbour should be contacted to establish availability of equipment. A full list of this equipment is provided in the National Plan.

12.3 SOUTH AFRICAN PETROLEUM INDUSTRY

The Oil Industry has various booms, skimmers and other equipment stored at various locations around the country. Anton Moldan should be contacted to establish the availability of this equipment (Tel 082 801 6215). A full list of the equipment held by SAPIA is provided in the National Plan.

12.4 COMMERCIAL CONTRACTORS

Various contractors such as Smit Amandla Marine, OPCSA, Drizit, ABZorbit, have equipment available at various locations. This equipment can be hired on contract, and skilled staff are available for deployment. The contact numbers for these organisations are provided at the end of Section 13.

12.5 LOCAL AUTHORITY EQUIPMENT AND MANPOWER

The equipment and materials required for beach clean-up operations by local authorities are for the most part not specifically for oil spills.

The following plant and machinery is likely to be required:

- Bulldozers
- Front-end loaders
- Low bed transporters
- Excavator and tractor loader backhoes
- Self loading trucks / self elevating scrapers
- Articulated dump trucks
- Tractors 2x4
- Tractors 4x4
- Platform truck and crane
- Tip trucks
- Water trucks
- Open trucks
- LDV's 4x4
- LDV's 2x4
- Vacuum tankers

Materials and equipment as listed below may also be needed:

- Portable Centrifugal pumps
- Sludge pumps
- Straw bales
- Petrol generator and lighting sets
- 200 litre drums and bins
- Wire mesh - diamond
- Plastic and hessian bags
- PVC sheeting
- Spades

In terms of manpower, supervisors, operators and labourers will also be required.

Where requirements for these resources exceed in-house availability, private local contractors can be approached. Local authorities should ensure that they know where these resources can be supplied.

13. TELEPHONE NUMBERS

13.1 PRIORITY NUMBERS

Organisation	Office Tel	Fax	Cell	Email
DEPARTMENT OF ENVIRONMENTAL AFFAIRS: MCPM				
Pollution Officers:				
Dr Yazeed Petersen (DD)	021 819 2450	021 819 2445	083 530 3127	ypeterson@environment.gov.za
Ms Feroza Albertus-Stanley (AD)	021 819 2457	021 819 2445	072 173 6234	feroza@environment.gov.za
Pollution Officer				
Equipment (Paarden Is.): Teboho Ntje	021 510 3957	021 510 3957	078 200 8442	tntje@environment.gov.za
SAMSA				
SAMSA: SOUTHERN REGION		041 582 2130		
Regional Manager: Capt N. Campbell	041 582 2138	0866 157489	083 309 6053	ncampbell@samsa.org.za
East London: Capt P Kroon (PO)	043 722 4120	043 722 2264 086 6158659	082 445 3166	pkroon@samsa.org.za
Port Elizabeth:Mr B Colenutt (PO) Capt Daron Burgess (DPO)	041 585 0051	041 582 1213 0866 942707	082 445 3167 082 374 7942	bcolenutt@samsa.org.za dburgess@samsa.org.za
Mossel Bay: Mr. Dave Manley	044 690 4201	044 691 1206 0866163370	082 477 1813	dmanley@samsa.org.za
SAMSA: WESTERN REGION		021 419 0730		
Regional Manager: Capt Dave Colly	021 421 6170	086 616 4104	083 412 8861	dcolly@samsa.org.za
Cape Town: Capt G Louw (PO) Mr. Barry Jubber (DPO)	021 421 6170	021 419 0730 086 696 9074	083 227 0721 082 6776630	glouw@samsa.org.za bjubber@samsa.org.za
Saldanha Bay: Mr. Martin Slabber	022 714 1612	022 714 3635 086 693 7084	082 789 6764	mslabber@samsa.org.za

Organisation	Office Tel	Fax	Cell	Email
Port Nolloth: Mr. Justin Coraizen	027 851 7695	027 851 7699	082 386 2141	jcoraizen@samsa.org.za
SAMSA: EASTERN REGION. **Regional Manager:** Capt. Saroor Ali	 031 307 1501	031 306 4983 0866 153417	 071 686 9593	 sali@samsa.org.za
Durban: Mr. Grant Conway	031 307 1501	031 306 4983 0866 157055	082 449 6350	gconway@samsa.org.za
Richard's Bay: Mr. Thandi Mehlo	035 788 0068	035 788 0067	082 492 4404	tmehlo@samsa.org.za
Centre of Sea Watch: Maritime Rescue Co-ordination Centre MRCC				
Head: Mr. Karl Otto	021 938 3317	021 938 3319 086 654 4742	082 812 2991	kotto@samsa.org.za
Capt Ravi Naicker	021 938 3310	021 938 3319	082 768 8401	rnaicker@samsa.org.za
Duty Controller: all hours	021 938 3300	021 938 3309		
SAMSA: Head Office: Head: Centre of Ships. Mr. Sobantu Tilayi Mr. Francis Chilalika (Operations Manager)	012 366 2600	012 366 2601 086 590 9056 086 615 0886	 071 608 6480 082 789 6802	 stilayi@samsa.org.za fchilalika@samsa.org.za
SAMSA Head Office CEO – Mr T Mokhele	 012 366 2600	 012 366 2601		
AMATHOLE DISTRICT MUNICIPALITY: Disaster Management: East London				
Duty Officer: Fire Department - All hours	043 831 1084			
BUFFALO CITY MUNICIPALITY: DISASTER MANAGEMENT: East London				
Duty Officer: Operations Room - All hours Fire Services: all hours	043 743 7118 043 705 9000	043 722 1515		

13.2 RESPONSIBLE LOCAL AUTHORITIES

ORGANISATION	TEL	FAX	CELL	EMAIL
BUFFALO CITY MUNICIPALITY Switchboard: 043 705 2000 Operations Room 043 743 7118 All hours				
Owen Becker (Disaster Management) Secretary: Tracey	043 743 7118 (24 hrs) 043 705 9032	043 722 1515 043 722 1514		owenb@buffalocity.gov.za traceyk@buffalocity.gov.za
Keshav Panday: (Amenities) Office Manager	043 735 0966 043 705 2946	043 735 1536	083 461 1702 082 322 4032	keshavp@buffalocity.gov.za
Siani Tinley: (Marine Aquarium)	043 705 2638	043 743 6801	082 328 1121	siani@elaquarium.co.za
Kamva Qwede: (Environment) Shirley Fergus: (IEMP)	043 707 5800 043 707 5800	043 740 0703	082 600 8343	kamvaq@buffalocity.gov.za shirleyf@buffalocity.gov.za
Yoliswa Sinyanya: (Waste)	043 722 1015	043 721 2018	083 234 7195	yoliswas@buffalocity.gov.za
Quinton Chetty (Traffic)	043 705 9302	043 743 0817	083 650 0084	QuintonC@buffalocity.gov.za
Mr. Berny Martin	043 705 9399	043 743 0817	083 662 0491	monicam@buffalocity.gov.za
Reo Schutte (IEMP)	043 707 5800 043 705 9731	043 740 0703	083 232 5055	ReoS@buffalocity.gov.za
Leigh-Anne Kretzmann (IEMP)	043-707 5800	086 675 1363	083 651 0685	nahoonpoint@hyperlink.co.za
Fire and Rescue	043 705 9000	043 742 0092	083 650 4027	andret@buffalocity.gov.za
AMATHOLE DISTRICT MUNICIPALITY Switchboard: 043 701 4000 Fire Department: 043 831 1084 (all hours)				
Howard Luphindo (DM)	043 721 3393/4	043 726 7472	082 451 7437	howardl@amatole-dm.co.za
Michael Burmeister (Conservation)	043 701 4054	043 722 8850	082 447 6024	michaelb@amatole-dm.co.za

ORGANISATION	TEL	FAX	CELL	EMAIL
TNPA: East London Harbour Port Control (24 hours)	043 700 2100 / 2142			
Naresh Sewnath (HM)	043 700 1183	086 648 7797	083 307 1228	naresh.sewnath@transnet.net
Thys Coetzee (Risk)	043 700 1186/7	043 700 2924	083 283 6565	thys.coetzee@transnet.net
EASTERN CAPE PARKS AND TOURISM AGENCY				
Regional Manager: Wandile Mzazi	043 742 2591	086 611 1630	082 781 8251	wandile.mzazi@ecpta.co.za
Sacha Peinke (Ecologist)	043 742 2557	086 619 5379	079 890 2243	Sacha.Peinke@ecpta.co.za
Bev Geach	043 742 2557	086 611 9208	082 304 4220	bev.geach@ecpta.co.za
Xolani Nikelo (ELCNR)	043 736 9909	043 736 9911	082 304 4228	Xolani.Nikelo@ecpta.co.za
NGQUSHWA MUNICIPALITY				
Peddie Environment Section	040 673 3095 040 673 3107	040 673 3771		
Hamburg	040 678 1067	040 673 3771		
Mr N Mjo: Community Services (Manager)	040 673 3095	040 673 3771	082 552 0140	namhla@ngqushwasmun.co.za mjonamhla@yahoo.com
Ms S Vellum: Disaster Management (seconded from ADM)	040 673 3216	040 673 3771	082 174 4867	
GREAT KEI MUNICIPALITY				
Switchboard	043 831 1028	043 831 1029		
Zelic Mbulawa (Technical Services)	043 831 1068	043 831 1029	071 174 9398	mzelic@lgnet.org.za

13.3 RELEVANT GOVERNMENT DEPARTMENTS

Organisation	Office Tel	Fax	Cell	Email
WEATHER FORECAST OFFICE: Port Elizabeth 041 5811 795 East London weather reports: 082 231 1625 or 082 231 1627 (maritime) all hours				
E. CAPE DEPARTMENT OF ECONOMIC DEVELOPMENT AND ENVIRONMENTAL AFFAIRS (DEDEA)				
Rick Hannan	043 707 4000	086 218 2445	082 939 3506	ricky.hannan@deaet.ecape.gov.za
Juan Greeff	043 707 4000			juan.greeff@deaet.ecape.gov.za
Nozuko Fotoyi	043 707 4000	086 218 2445	073 142 1823	nozuko.fotoyi@deaet.ecape.gov.za
DAFF				
Keith Govender: (pollution vessels)	021 402 3079	021 402 3113	084 597 1147	KeithG@daff.gov.za
M. Ngadlela (DD) Fisheries Control Officers	021 402 3911	021 402 3113		MqondisiN@daff.gov.za
S. Goge East London: Fisheries Officer	043 722 2091 043 722 8176			sgoge@deat.gov.za mcmeastlondon@environment.gov.za
Hamburg:	040 678 1103			

13.4 SCIENTIFIC ADVISORY PERSONNEL AND I&AP'S

Organisation	Office Tel	Fax	Cell	Email
SAPIA: Anton Moldan	021 671 8460	086 668 8054	082 801 6215	anton@sapia.co.za
SEA BIRD and MAMMAL RESCUE				
SANCCOB (Seabirds) Venessa Strauss Nola Parsons	 021 557 6155 021 557 6155	 021 557 8804 021 557 8804	 082 325 4638 084 822 0189	 venessa@sanccob.co.za vet@sanccob.co.za
Dr Rob Crawford: Seabirds, DEA	021 402 3140	021 402 3330	082 578 1533	rcrawford@environment.gov.za
Bruce Dyer: Seabirds, DEA	021 402 3138	021 402 3330	082 953 3153	bdyer@environment.gov.za
Mike Meyer: Marine Mammals DEA	021 402 3173	021 402 3330	082 578 7607	mmeyer@environment.gov.za
EAST LONDON MUSEUM: Greg Brett	043 743 0686	043 743 0128	083 417 3801	gbrett@elmuseum.za.org
EASTERN CAPE DEVELOPMENT CORP Rory Haschick	043 704 5600 043 704 5710	043 704 5700	 083 410 3099	info@ecdc.co.za rory@ecdc.co.za
ESPADON MARINE: Guy Musson	083 658 7391	086 556 4439	083 658 7391	elidz@espadonmarine.co.za
PURE OCEAN: Andre Bok	043 735 2156	043 702 8269	083 489 8124	andre@pureocean.co.za
MBASA FISH FARM Dave Krebser	082 492 9810		082 492 9810	dave.krebser@pixie.co.za
WILD COAST ABALONE: Richard Clarke	083 232 9010	043 8411 998	083 232 9010	admin@wcabalone.co.za

13.5 CONTRACTORS AND SERVICE PROVIDERS

Organisation	Office Tel	Fax	Cell	Email
SMIT AMANDLA MARINE				
Nomkhitha Mbele	021 507 5777	021 507 5885	079 699 4406	n.mbele@smit.com
Paul Maclons (CEO)	021 507 5777	021 507 5885	082 909 2013	p.maclons@smit.com
Dave Murray	021 507 5777	021 507 5885	082 909 9948	d.murray@smit.com
Dave Main	021 507 5777	021 507 5885	082 907 2775	d.main@smit.com
SHELTAM AVIATION:				
Surveillance aircraft				
Peter Roux (Cape Town office)	021 510 3341	021 510 3432	082 800 4560	peterroux@sheltam.com
Peter Woods (Port Elizabeth office)	041 581 4194	041 581 3413	083 452 7007	pwoods@sheltam.com
Donovan Jordaan (Pilot)			083 651 4863	sacoastguard@hotmail.co.za
Thys du Toit (Pilot)			083 651 4863	sacoastguard@hotmail.co.za
To contact pilots in the air – emergency only				
Phone Air Traffic Control:				
Cape Town	021 937 1116			
Overberg	028 425 4111			
George	044 801 8809			
Port Elizabeth	041 501 5900			
East London	043 736 6161			
Durban	031 469 0005			
ENVIROSERV Customer Care	0800 192 783			info.ct@enviroserv.co.za
Francois Putter (Regional Hazmat Manager)	041 466 2741	086 6332 565	082 779 6340	Franspt@enviroserv.co.za
Francois Lessing (Hazmat Technician) – E.L.			082 334 0636	
Nico Prinsloo (Hazmat Technician) – P.E.			082 779 6345	
DRIZIT Customer Care	0800 202 202			
Durban: Quentin Labuschage	031 274 2300	031 206 1189	083 267 7796	

Organisation	Office Tel	Fax	Cell	Email
OIL RECYCLING				
Fuel Firing Services: Depot Manager	082 321 7267		082 321 7267	
The ROSE Foundation: Raj Lochan	021 448 7492	021 448 7563	083 378 8556	rose@rosefdn.org
NORA-SA	086 066 7272	086 652 7384		usedoil@iafrica.com
Oilkol	086 110 1961			info@oilkol.co.za
OPCSA				
Piet Coetzee	021 912 1600	021 912 1613	082 566 0525	pcoetzee@opcsa.co.za