



NSW NPWS

Procedural

Guidelines for the

Rescue and

Rehabilitation of

Oiled Wildlife

2003

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Any new information or comments regarding oiled wildlife response can be directed to the Wildlife Management Coordinator (ph. 9585 6576), NPWS, 43 Bridge Street, Hurstville, NSW, 2220.

CONTENTS

ACKNOWLEDGMENTS

1.1 INTRODUCTION

1.2 OBJECTIVES

1.3 SCOPE OF THE GUIDELINES

2.0 INCIDENT CONTROL AND COST RECOVERY

2.1 INCIDENT CONTROL STRUCTURE

2.2 COST RECOVERY

2.2.1 DOCUMENTATION FOR COST RECOVERY (FROM AMSA)

3.0 NPWS POSITION ROLES AND RESPONSIBILITIES

3.1 OPERATIONS SECTION: WILDLIFE UNIT:
WILDLIFE OPERATIONS COORDINATOR (WOC)

3.2 OPERATIONS SECTION: WILDLIFE UNIT:
RESCUE DIVISIONAL COMMANDER

3.3 OPERATIONS SECTION: WILDLIFE UNIT:
RESCUE SECTOR COMMANDER

3.4 OPERATIONS SECTION: WILDLIFE UNIT:
TRANSPORT SECTOR COMMANDER

3.5 OPERATIONS SECTION: WILDLIFE UNIT:
TRIAGE/FIRST AID SECTOR COMMANDER

3.6 OPERATIONS SECTION: WILDLIFE UNIT:
REHABILITATION DIVISIONAL COMMANDER

3.7 OPERATIONS SECTION: WILDLIFE UNIT:
CLEANING AND DRYING SECTOR COMMANDER

3.8 OPERATIONS SECTION: WILDLIFE UNIT:
REHABILITATION SECTOR COMMANDER

3.9 OPERATIONS SECTION: ENVIRONMENT UNIT
OILED HERITAGE/WILDLIFE ADVISER

3.10 OPERATIONS SECTION: OH&S UNIT:
WILDLIFE SAFETY OFFICER

3.11 OPERATION SECTION: INVESTIGATION UNIT:
WILDLIFE INVESTIGATION: NPWS SENIOR INVESTIGATOR

3.12 OPERATIONS SECTION: MARINE UNIT:
NPWS BOATS

3.13 OPERATIONS SECTION: AVIATION UNIT:
NPWS AIRCRAFT

3.14 OPERATIONS SECTION: SHORELINE UNIT:
ABORIGINAL SITES/WILDLIFE ADVISER

3.15 PLANNING SECTION: SITUATION UNIT:
HERITAGE/WILDLIFE SITUATION OFFICER

3.16 PLANNING SECTION: RESOURCES UNIT:
WILDLIFE RESOURCES OFFICER

3.17 PLANNING SECTION: ENVIRONMENT UNIT:
OILED HERITAGE/WILDLIFE ADVISER
3.18 PLANNING SECTION: RESPONSE PLANNING UNIT:
HERITAGE/WILDLIFE PLANNING OFFICER
3.19 LOGISTICS SECTION:
WILDLIFE LOGISTICS SUPPORT OFFICER
3.20 INCIDENT MANAGEMENT TEAM:
NPWS EXECUTIVE COMMITTEE REPRESENTATIVE (ADVISED TO INCIDENT
MANAGEMENT TEAM)
3.21 NPWS POLICY LIAISON OFFICER
3.22. MEDIA LIAISON OFFICER – WILDLIFE RESPONSE

4.0 RESCUE AND REHABILITATION OF IMPACTED WILDLIFE

4.1 BACKGROUND
4.2 LEVEL OF RESPONSE
4.2.1 BIRDS
4.2.2 MARINE MAMMALS AND TURTLES

5.0 PROCEDURES FOR SETTING UP FACILITIES FOR OILED BIRDS

5.1 INTRODUCTION
5.2 CRITERIA FOR SELECTION OF SUITABLE TREATMENT AND REHABILITATION
SITES
5.3.1 FIRST AID FACILITY – MINIMUM REQUIREMENTS
5.3.2 FIRST AID EQUIPMENT REQUIRED
5.4.1 CLEANING AND DRYING FACILITY
5.4.2 CLEANING AND DRYING EQUIPMENT REQUIRED
5.5.1 REHABILITATION FACILITY
5.5.2 INDOOR HOUSING
5.5.3 OUTDOOR HOUSING
5.5.4 REHABILITATION EQUIPMENT REQUIRED

6.0 WILDLIFE PROCEDURES DURING AN OIL SPILL RESPONSE

6.1 GENERAL FLOW OF WILDLIFE RESPONSE
6.2 SEARCH AND RESCUE
6.2.1 SEARCHING
6.2.2 RESCUE
6.2.3 EQUIPMENT REQUIRED
6.3 TRIAGE AND FIRST AID
6.3.1 PRIORITY OF TREATMENT (TRIAGE)
6.3.2 WILDLIFE FIRST AID
6.4.1 TRANSPORTATION
6.4.2 EQUIPMENT REQUIRED
6.5.1 CLEANING AND DRYING WILDLIFE
6.6.1 REHABILITATION OF WILDLIFE
6.7.1 RELEASE OF WILDLIFE
6.7.2 BIRDS ARE READY FOR RELEASE WHEN:
6.7.3 BEFORE RELEASE ALL BIRDS MUST BE:
6.7.4 BIRDS UNSUITABLE FOR RELEASE

6.8 WASTE DISPOSAL PROCEDURES

6.8.1 OILED AND CONTAMINATED WATER, RAGS AND TOWELS

6.8.2 DEAD WILDLIFE

6.9 OCCUPATIONAL HEALTH AND SAFETY (OH&S)

6.10 HYGIENE AND QUARANTINE ISSUES IN WILDLIFE RESPONSE PLANNING & OPERATIONS

6.11 CRITERIA FOR SCALING DOWN OR DEMOBILISING WILDLIFE RESPONSE

7.0 LAW ENFORCEMENT PROCEDURES FOR OILED WILDLIFE INCIDENT

7.1 RECORDING OFFICER

7.2 RECORDING

7.3 SAMPLES

7.4 EXHIBITS

7.5 EQUIPMENT REQUIRED

8.0 VOLUNTEER MANAGEMENT (ADAPTED FROM AMSA)

8.1 POSSIBLE ROLES FOR VOLUNTEERS

8.2 ADVANTAGES OF LOCAL VOLUNTEERS

8.3 VOLUNTEER SELECTION PROCESS

8.4 GUIDELINES FOR THE MANAGEMENT OF VOLUNTEERS

8.5 COUNSELLING OF WILDLIFE RESPONSE PERSONNEL

8.6 VOLUNTEER BRIEFING MATERIAL

9.0 MEDIA MANAGEMENT

9.1 MEDIA GUIDELINES

9.2 INFORMATION SUPPLIED TO THE MEDIA SHOULD INCLUDE:

10.0 TRAINING

10.1 NPWS STAFF TRAINING

10.2 VOLUNTEER ORGANISATIONS

10.3 TRAINING PROVIDERS

10.3.1 TARONGA ZOO

10.3.2 NEWCASTLE PORT CORPORATION

11.0 USEFUL REFERENCE MATERIAL NOT INCLUDED IN APPENDICES

11.1 VIDEO

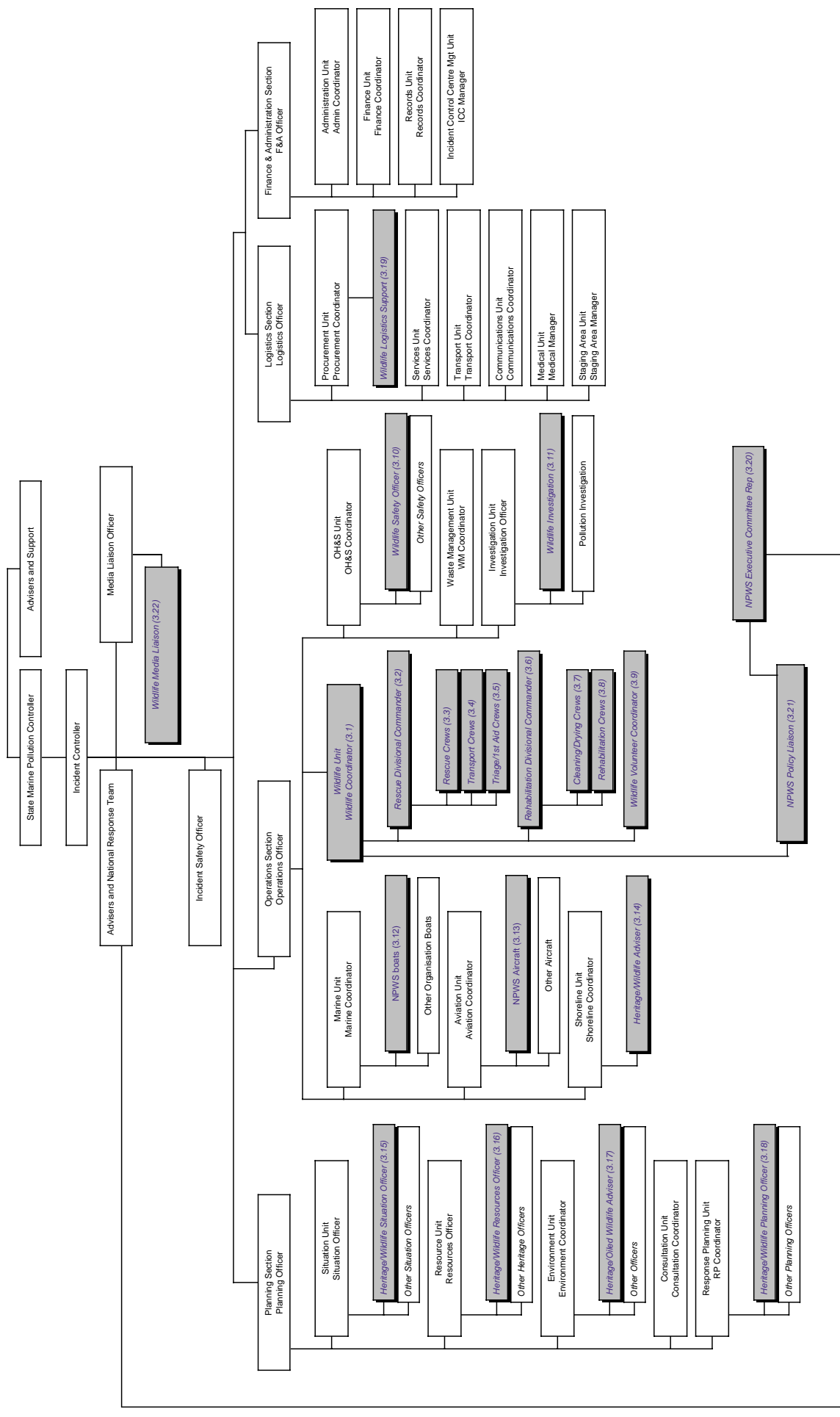
11.2 CD-ROM

11.3 MANUAL, PAPERS ETC

APPENDICES

- APPENDIX A** **NPWS OILED WILDIFE POLICY**
- APPENDIX B** **NSW STATE WATERS MARINE OIL AND
CHEMICAL SPILL CONTINGENCY PLAN**
- APPENDIX C** **AMSA: EFFECTS OF MARITIME OIL OF WILDLIFE**
- APPENDIX D** **FIELD MANUAL: RESCUE AND REHABILITATION OF
OILED BIRDS, TARONGA ZOO**
- APPENDIX E** **1) TRANSPORT, HANDLING AND HUSBANDRY OF
SEABIRDS (E. HALL 2000),
2) REHABILITATION AND RELEASE OF SEABIRDS
(E. HALL 2000).**
- APPENDIX F** **OIL SPILL CONTINGENCY PLANS:
GENERAL GUIDELINES FOR DEALING WITH CETACEANS
(GUBBAY AND EARLL 1999)**
- APPENDIX G** **INCIDENT FORMS
EQUIPMENT LISTS**
- APPENDIX H** **HUNTER REGION INCIDENT RESPONSE PROCEDURES**

Oiled Wildlife Response Structure under the MOCSCP during a major oil spill



NPWS PROCEDURAL GUIDELINES FOR THE RESCUE AND REHABILITATION OF OILED WILDLIFE

1.1 Introduction

Major oil spills have occurred, and will continue to occur, in Australia and other parts of the world. In 2000, the Australian Maritime Safety Authority (AMSA) commissioned a risk assessment of pollution in Australian waters which indicated Newcastle, Botany Bay and Sydney ports as relatively high risk, while other areas along the NSW coast indicated relatively low risk.

A major spill is most likely to come from ships en route to and from ports, crude oil refineries or storage and docking facilities. In the event of a major spill it is likely that large numbers of wildlife, mostly seabirds but including marine mammals and turtles, will be affected.

In the event of a spill, the NSW National Parks and Wildlife Service will be requested by the relevant combat agency (which is determined by the location of the spill) via the Agricultural and Animal Services Functional Area Coordinator to:

- manage the rescue and rehabilitation of oiled wildlife;
- provide advice on sensitive areas to be protected from the spill and also potential damage resulting from clean-up operations, and;
- provide a wildlife liaison officer to the Incident Control Centre.

1.2 Objectives

The objectives of the procedural guidelines are to:

- identify personnel roles and responsibilities during an oiled wildlife incident;
- identify and outline appropriate operational procedures for the rescue and rehabilitation of impacted wildlife;
- identify required equipment for incident response.
- provide a structure for the completion of Regional Incident Response Procedures; and
- identify training requirements for NPWS staff, other organisations and volunteers.

1.3 Scope of the guidelines

These guidelines provide generic structures, procedures and guidelines to be used by the NPWS across all land tenures in NSW. They should be read in conjunction with the NSW State Waters Marine Oil and Chemical Spill Contingency Plan 2002 (MOSCSP) (Appendix B) and local District Disaster Plans (DISPLAN).

NPWS Regions are required to develop local Incident Response Procedures (IRP) using the guidelines as a basis and providing detail on likely species affected, location of suitable wildlife rehabilitation facilities, availability of equipment, trained staff and volunteer personnel. The IRP should also detail local reporting procedures (refer to Appendix H for Hunter Region Example)

1.4 Review Procedure

This document will be reviewed on a three yearly basis or following any oil spill or hazardous chemical incident during which a wildlife response was required.

2.0 Incident Control and Cost Recovery

2.1 Incident Command Structure

An expanded version of the Incident Control System (ICS) is used in responding to marine oil spill incidents in accordance with MOSCSP.

Trained and competent individuals from NPWS and other organisations (eg Taronga Zoo) will be appointed to coordinate the rescue and rehabilitation of oiled wildlife.

The system makes provision for assistance from NPWS under the Operations and Planning sections.

The wildlife operational component for the incident is the Wildlife Unit in the Operation Section. The Wildlife Coordinator will effectively act as the incident controller for the wildlife component and have strong links to personnel in all Sections.

The Planning Section will have specific Heritage/Wildlife personnel who will have close links to all planning personnel for the whole incident and the Wildlife Unit in the Operations Section

The Logistics section deals with the entire incident, not just the wildlife response. It will be desirable however, to have NPWS logistics personnel who are aware of local wildlife contacts and equipment availability.

Currently the NPWS does not have a representative on the National Response Team who advises the Incident Controller and the State Marine Pollution Controller during an oil spill incident and in pre planning preparedness. It is likely that this situation will change and the NPWS will be involved in a greater capacity.

If NPWS is requested to participate under the State MOSCSP, the NPWS will do so under the State MOSCSP structure outlined in Figure 1. Specific wildlife response positions are highlighted and position descriptions provided in Section 3.

2.2 Cost Recovery

The NPWS can claim all costs associated with oil spill cleanup only if the Service is formally requested by the relevant combat agency to assist under the State MOSCSP.

Following is an extract from the Australian Maritime Safety Authority (AMSA); Under the Civil Liability/Fund regime (which applies to oil tankers only), claims for compensation in respect of costs incurred to clean birds and other animals are admissible provided the costs are reasonable and operations are; 1) carried out in a responsible manner, 2) useful for mitigating the impact on birds and other animals, and 3) carried out efficiently.

The development of a national wildlife response plan will assist Australia in meeting these criteria.

The two main examples where this type of compensation has been paid were *Tanio* (1980) and more recently the *Braer* oil spill (1993). Such claims fall within the broader

classification of “preventive measures”, and in respect of the *Braer* wildlife clean up claims were met with no discussion or debate in the IOPC Fund Executive Committee.

There is therefore little doubt that “quantifiable” elements of such costs, in particular the costs of materials, are admissible claims. Costs of personnel involved in wildlife cleaning would also appear to be admissible, although the experience in *Braer* and *Tanio* is that much of the work is carried out by unpaid volunteers. As noted above, the proposed Australian plan involves supervised volunteer labour to a significant extent.

The extent to which compensation will be available for other less “quantifiable” elements of wildlife response, such as long term rehabilitation and/or monitoring will depend on the meaning given to the term “reasonable” by, respectively, the P & I Club, the IOPC Fund and the Courts.

In respect of damage caused to wildlife by oil spills from non-tankers (eg the *Iron Baron* case), current P & I insurance coverage is limited by the Limitation of Liability of Maritime Claims by reference to the tonnage of the ship. These limits were recently increased in amendments agreed by IMO at the May Diplomatic Conference at which the HNS Convention was concluded. In such cases the upper limit of insurance is confined to \$500 million (only available if the ship’s liability is broken by some contributing failure on behalf of the owners or management of the vessel). The *Iron Baron*’s limitation amount was reported to be between \$8 and \$13m.

2.2.1 Documentation for Cost Recovery (from AMSA)

The importance of accurate records is essential for cost recovery from the spiller or their insurer and for possible court proceedings.

The records should be as detailed as possible but must include:

- accurate records of staff, hours worked and personal expenses,
- records of specialists used and associated expenses,
- records of all equipment and supplies purchased, used, lost etc.
- documentation of activities undertaken,
- personal logs of each individual,
- photographic or video documentation,
- computer files and databases of the incident.

3.0 NPWS Position Roles and Responsibilities

3.1 Operations Section: Wildlife Unit: Wildlife Coordinator (WC)

3.1.1 Structure

The WC is the most senior field role in the Wildlife response component of the incident. The WC will be appointed by the NPWS Executive Committee Representative (ECR). The WC reports to the Operations Officer for the incident and liaises with the ECR throughout the incident.

The following positions will report directly to the WC; Rescue Divisional Commander, Rehabilitation Divisional Commander and the volunteer coordinator.

All other Heritage/Wildlife coordinator and wildlife investigation positions in the structure must also liaise with the WC.

3.1.2 Role

The Wildlife Coordinator (WC) manages the Wildlife Unit of the of the Operations Section at the incident site during a large oil spill incident and has strong links to wildlife personnel in all sections.

3.1.3 Duties

- Coordinating field operations for the rescue and rehabilitation of oiled wildlife;
- Establishing required wildlife rehabilitation centres;
- Maintaining records and information on observed and/or treated wildlife;
- Establishing parameters for resource deployment including scaling down and ending operations;
- Providing advice on, and ensuring compliance with, occupational health and safety regulations;
- Establishing law enforcement data collection and reporting procedures in conjunction with the Senior Investigator;
- Providing for effective communication with the media, through the Media Liaison Officer, on wildlife issues;
- Reviewing wildlife response regularly with the Operations Officer of the Incident and ECR; and
- Providing the Finance and Administration Officer with detailed records of costs associated with the response for cost recovery, where possible.
- Liaising extensively and regularly with the Heritage/Wildlife Planning personnel.

3.2 Operations Section: Wildlife Unit: Rescue Divisional Commander

3.2.1 Structure

The Rescue Divisional Commander (ResDC) will be appointed by the WC, and reports to the WC.

The following positions will report directly to the ResDC; Rescue Sector Commander, Triage/First Aid Sector Commander and the Transport Sector Commander.

3.2.2 Role

The ResDC is responsible for on site coordination and management of the capture, initial first aid and transport of oiled wildlife to the cleaning facility.

3.2.3 Duties;

- Obtain briefing from the WC;
- Assess extent of resources required including staff, volunteers and equipment from the WC;
- Request required resources from the WC;
- Liaise with the WC and Wildlife Planning personnel with respect to search areas;
- Manage and brief Rescue, Triage/1st Aid, and Transport Sector Commanders and crews;
- Organise NPWS crew leaders for search teams;
- Liaise with the WC and the Senior Investigator;
- Ensure collection of appropriate information for investigation unit;
- Establish initial assessment centres if necessary;
- Organise vehicles, boats, operators and drivers to transport wildlife from collection sites to First Aid Facility;

- Ensure that all volunteers, including specialists, have been registered and briefed by the Wildlife Volunteer Coordinator and provided with onsite training if necessary;
- Ensure all wildlife is tagged and that accurate records of the location and destination of each bird is collected;
- Liaise with OH&S Unit to ensure safety of personnel and volunteers involved in the search and collection of wildlife;
- Maintain log of events, actions and staff involved;
- Report to WC.

3.3 Operations Section: Wildlife Unit: Rescue Sector Commander

3.3.1 Structure

The Rescue Sector Commander (ResSC) will be appointed by the WC and reports to the ResDC.

The following positions will report directly to the ResSC; Rescue Crew Leaders.

3.3.2 Role

The role of the ResSC is to manage the rescue crews which are responsible for finding and recovering injured wildlife, as quickly as possible without compromising personal health and safety, and delivering wildlife to the first aid facility, while minimising distress and injury.

3.4.3 Duties

- Deploy personnel and equipment for wildlife rescue;
- Brief rescue crews to;
 - Search assigned areas for wildlife;
 - Liaise with shoreline cleaning teams which are likely to find oiled animals first;
 - Capture and label all affected wildlife and deliver to first aid facility;
 - Record required information on all affected wildlife, including information for investigation unit;
 - Maintain safety of personnel;
 - Be aware of toxicity of oil spilled and safety procedures via the Job Safety Brief;
 - Report to ResSC.

3.5 Operations Section: Wildlife Unit: Triage/First Aid Sector Commander

3.5.1 Structure

The Triage/First Aid Sector Commander (TFASC) will be appointed by the WC and reports to the ResDC.

The following positions will report directly to the TFASC; Triage/First Aid Crew Leaders.

3.5.2 Role

The role of the TFASC is to ensure that every animal that is brought in is accurately and quickly assessed, and either euthanased or provided appropriate treatment.

3.5.2 Duties

Brief Triage Crews to;

- Quickly assess the condition of wildlife rescued;
- Prioritise which animals require treatment;
- Undertake euthanasia of wildlife if required;
- Designate the appropriate First Aid;
- Maintain record of species, condition and fate of wildlife;
- Ensure leg tag is on and secure;
- Maintain record of Barbiturate or other drugs used;
- Observe safety procedures via the Job Safety Brief.

Brief First Aid Crews to;

- Administer First Aid as determined by the Triage Crew;
- Box wildlife ready for transport;
- Monitor condition of wildlife prior to transport;
- Record the first aid regime to accompany individual animal in transport;
- Ensure leg tag is on and secure;
- Observe safety procedures via the Job Safety Brief.

3.6 Operations Section: Wildlife Unit: Rehabilitation Divisional Commander

3.6.1 Structure

The Rehabilitation Divisional Commander (RehDC) will be appointed by the WC and reports to the WC.

The following positions will report directly to the RehDC; Cleaning and Drying Sector Commander and the Rehabilitation Sector Commander.

3.6.2 Role

The RehDC is responsible for the management of the rehabilitation of affected wildlife including veterinary assessment, washing, drying, husbandry and release.

3.6.3 Duties

- Obtain briefing from the WC;
- Request access through WC to an appropriate rehabilitation facility, eg council sporting field;
- Assess extent of facilities, equipment, staff and volunteers required and allocate accordingly;
- Request veterinarians and keepers through Planning Section;
- Establish and manage crews of personnel for cleaning, drying, rehabilitation and release of wildlife;
- Authorise requests for equipment and materials as requested from Sector Commanders;
- Ensure proper storage and disposal of contaminated post washing water and dead wildlife;
- Ensure that all volunteers including specialists have been registered and briefed by the volunteer coordinator and provided with on-site training if necessary;
- Ensure that accurate records are kept for each individual animal at each stage of treatment;
- Liaise with the volunteer coordinator to ensure appropriate numbers of volunteers are available for each section;

- Maintain log of events, actions and staff utilised;
- Establish law enforcement data collection and reporting procedures in conjunction with the Law Enforcement Officer;
- Observe safety procedures via the Job Safety Brief;
- Liaise with Safety Officer to ensure the health and safety of staff and volunteers involved;
- Advise Media Liaison Officer of access for the media;
- Co-ordinate closure and cleaning of treatment facilities;
- Report to WC.

3.7 Operations Section: Wildlife Unit: Cleaning and Drying Sector Commander

3.7.1 Structure

The Cleaning and Drying Sector Commander (CDSC) will be appointed by the WC and reports to the RehDC.

The following positions will report directly to the CDSC; Cleaning and Drying Crew Leaders.

3.7.2 Role

The role of the CDSC is to manage the cleaning and drying crews who are responsible for removing oil from the animals as quickly and efficiently as possible causing minimum stress to the animal.

3.7.3 Duties

- Organise setting up of cleaning and drying facility and equipment;
- Brief cleaning and drying crews to;
 - Clean and dry each animal as required;
 - Provide further veterinary assessment and/or treatment where necessary;
 - Ensure accurate records of each animal are maintained;
 - Ensure all animals remain tagged and clearly identified;
 - Observe safety procedures via the Job Safety Brief;
- Report to RehDC.

3.8 Operations Section: Wildlife Unit: Rehabilitation Sector Commander

3.8.1 Structure

The Rehabilitation Sector Commander (RSC) will be appointed by the WC and reports to the RehDC.

The following positions will report directly to the RSC; Rehabilitation Crew Leaders.

3.8.2 Role

The role of the RSC is to manage the rehabilitation crews who are responsible for providing animals with the required food, water and shelter and other conditions required for their recovery and eventual release.

3.8.3 Duties

- Organise setting up of rehabilitation facility and equipment;
- Order wildlife food requirements through Wildlife Logistics Officer;
- Brief rehabilitation crews to;
 - Ensure all animals receive required veterinary treatment;
 - Manage and maintain facilities to provide adequate care for rehabilitating animals;
 - Maintain accurate records of all animals in rehabilitation;
 - Ensure all animals are adequately tagged for easy identification;
 - Care for and monitor all rehabilitated wildlife;
 - Observe safety procedures via the Job Safety Brief;
- Report to RehDC.

3.9 Operations Section: Wildlife Unit: Wildlife Volunteer Coordinator

3.9.1 Structure

The Wildlife Volunteer Coordinator(WVC) will be appointed by WC and reports to the WC. The following positions will liaise to the WVC; Wildlife Resources Officer, Rescue Divisional Commander and the Rehabilitation Divisional Commander.

3.9.2 Role

The WVC is responsible for managing and coordinating volunteers to assist in the rescue and rehabilitation of oiled wildlife.

3.9.3 Duties:

- Obtain briefing from the WC;
- Liaise with Planning and Operations staff to determine available resources and volunteer requirements;
- Identify and contact nominated volunteer organisations to request volunteers;
- Establish a dedicated phone line for volunteer inquiries;
- Arrange briefing locations for all volunteers;
- Establish volunteer registry and ensure that ALL volunteers are registered, including veterinarians and keepers;
- Ensure badges are worn by registered volunteers identifying them as such;
- Establish competence and skills register of volunteers and deploy them accordingly to relevant sections;
- Ensure that all volunteers are briefed fully with respect to safety and legal considerations, operational procedures and the command structure;
- Establish on-site training facilities for untrained volunteers and staff;
- Ensure that no volunteers assists in the operation unless they have been previously trained or given onsite training;
- Establish volunteer rosters for each area and ensure that the arrival and departure of all volunteers is logged;
- Ensure volunteers take adequate rest and meal breaks;
- Ensure that volunteers do not speak directly to the media unless approved by the media officer;
- Ensure that any injuries received by volunteers are attended to by a first aid officer and that the injury is documented no matter how minor;
- Report to WC.

3.10 Operations Section: OH&S Unit: Wildlife Safety Officer

3.10.1 Structure

The Wildlife Safety Officer will be appointed by the OH&S Coordinator and reports to the OH&S Coordinator.

3.10.2 Role

The Safety Officer is responsible for preparing Job Safety Analysis documentation and providing briefings to onground operations crews who are working with wildlife.

3.10.3 Duties

- Obtain briefing from OH&S Coordinator;
- Brief Wildlife crews regarding job safety;
- Ensure accident and near miss reports are prepared and submitted.

3.11 Operation Section: Investigation Unit: Wildlife Investigation: NPWS Senior Investigator

Refer to Law Enforcement Section 7 in Manual for details.

3.12 Operations Section: Marine Unit: NPWS Boats

All vessels, including NPWS vessels will be coordinated through the Marine Unit.

All vessels operators are to report to the Marine Coordinator before entering the incident location for briefing.

3.13 Operations Section: Aviation Unit: NPWS Aircraft

All aircraft, including NPWS aircraft will be coordinated through the Aviation Unit.

All pilots are to report to the Aviation Coordinator before entering the incident location for briefing.

3.14 Operations Section: Shoreline Unit: Heritage/Wildlife Adviser

3.14.1 Structure

The Heritage/Wildlife Adviser will be appointed by the WC and reports to the Shoreline Coordinator.

3.14.2 Role

The aim of the Heritage/Wildlife Adviser is to ensure Shoreline cleanup crews do not damage Aboriginal Sites, historic sites or sensitive wildlife habitats.

3.14.3 Duties

- Obtain briefing from Shoreline Coordinator;
- Liaise with Planning Section for updated information on Aboriginal Sites and sensitive wildlife habitats;
- Provide onground advice to cleanup crews.

3.15 Planning Section: Situation Unit:

Heritage/Wildlife Situation Officer

3.15.1 Structure

The Heritage/Wildlife Situation Officer(H/WSO) will be appointed by WC and reports to the Situation Coordinator and the WC.

The following positions will liaise with the H/WSO; Wildlife Resources Officer, Oiled Heritage/Wildlife Adviser, and Heritage/Wildlife Planning Officer.

3.15.2 Role

Responsible for assembling information on the extent to the impact of pollution on Aboriginal sites, historic heritage and wildlife, developing tactics and strategies for rescue and rehabilitation, and recording data from captured wildlife.

3.15.3 Duties

- Obtain briefing from Situation Coordinator;
- Liaise with other Wildlife personnel in Planning Unit;
- Collect and analyse operational data and scientific data throughout the duration of the operation; including
 1. The extent and impact of the spill on wildlife and wildlife habitat.
 2. Weather forecasts.
 3. Predicted movement of the spill and potentially threatened habitats and/or species, and Aboriginal sites and historic heritage.
- Develop strategies to prevent oiling of wildlife where possible;
- Supervise banding of wildlife to be released;
- Maintain records of wildlife dispatched to treatment centres, dead wildlife and released wildlife;
- Debrief all Divisional Commanders and Sector Commanders
- Review information for the preparation of the Incident Action Plan;
- Distribute all weather data forecasts;
- Assist WPO to draft the Incident Action Plan;
- Report to Situation Coordinator.

3.16 Planning Section: Resources Unit:

Wildlife Resources Officer

3.16.1 Structure

The Wildlife Resources Officer(WRO) will be appointed by WC and reports to the Resource Coordinator.

The following positions will liaise to the WRO; Oiled Heritage/Wildlife Adviser, Heritage/Wildlife Situation Officer, Heritage/Wildlife Planning Officer and Wildlife Volunteer Coordinator.

3.16.2 Role

The WRO is responsible for the development of staff rosters, ensuring the provision of adequate staff numbers and contacting and acquiring specialist resources as required.

3.16.3 Duties

- Obtain briefing from Resources Coordinator.
- Liaise with other Wildlife personnel in Planning Unit
- Ensure status and location of personnel, volunteers and equipment are recorded;
- Establish staff rosters on a 12 hour shift basis and maintain time sheets for each participant;
- Establish checking-in and checking-out system;
- Allocate resources in accordance to the incident action plan;
- Request and supervise deployment of out-of-area crew and volunteers;
- Provide resources information to specific requests;
- Ensure display of resources information at specified locations;
- Advise WC of allocated resources;
- Handle requests for resource support and servicing from the sites of Operations;
- Maintain log of activities;
- Report to Resources Coordinator.

3.17 Planning Section: Environment Unit: Oiled Heritage/Wildlife Adviser

3.17.1 Structure

The Oiled Heritage/Wildlife Adviser (OHWA) will be appointed by WC and reports to the Environment Coordinator.

The following positions will liaise to the OHWA; Wildlife Resources Officer, Heritage/Wildlife Situation Officer, Heritage/Wildlife Planning Officer and Wildlife Volunteer Coordinator.

3.17.2 Role

The OHWA provides expert advice on the protection of Aboriginal Sites and protection, capture and rehabilitation of oiled wildlife to the Planning Section during a large oil spill incident.

3.17.3 Duties

- Obtain briefing from Environment Coordinator;
- Provide expert advice on all aspects of oiled wildlife response;
- Review information for the preparation of the Wildlife IAP;
- Assist WPO prepare the Wildlife IAP;
- Liaise with other Wildlife personnel in Planning Unit;
- Plan requirements for rescue and rehabilitation procedures, including staff required;
- Advise on suitable areas for release of rehabilitated wildlife;
- Report to Environment Coordinator.

3.18 Planning Section: Response Planning Unit: Heritage/Wildlife Planning Officer

3.18.1 Structure

The Heritage/Wildlife Planning Officer(H/WPO) will be appointed by WC and reports to the Response Plan Coordinator.

The following positions will liaise to the H/WPO; Oiled Heritage/Wildlife Adviser, Wildlife Resources Officer, Heritage/Wildlife Situation Officer, and Wildlife Volunteer Coordinator.

3.18.2 Role

Coordinate, develop and review Wildlife Incident Action Plan.

3.18.3 Duties

- Prepare Incident Action Plan for daily wildlife operational activities;
- Provide summary information on the operations for the Planning Officer;
- Maintain log of activities.

3.19 Logistics Section: Wildlife Logistics Support Officer

3.19.1 Structure

The Wildlife Logistics Support Officer (WLSO) will be appointed by WC and reports to the Logistic Officer for the incident, and liaises with the WC.

3.19.2 Role

The WLSO is responsible for the coordination of Logistical support for the wildlife response.

3.19.3 Duties

- Obtain briefing from Logistics Officer
- Liaise with the WC;
- Provide facilities, services and materials in support of the incident;
- Provide transport, fuel, security, mechanical services etc on site;
- Maintain records of supplies and resources at site;
- Ensure adequate supplies of equipment are on site;
- Ensure personnel have adequate and appropriate food, clothing etc;
- Provide personnel as directed by the WC;

3.20 Incident Management Team: NPWS Executive Committee Representative (Adviser to Incident Management Team)

3.20.1 Structure

The NPWS Executive Committee Representative (ECR) will be appointed to the Incident Management Team responsible for the total incident. The ECR is appointed by the NPWS Director General and reports to the incident management team.

No positions report directly to the ECR however, all NPWS coordinators should liaise with the ECR.

3.20.2 Role

The Executive Committee Representative will advise on the capabilities and current status of resources of the wildlife rescue and rehabilitation operation. They must have the authority to commit resources from the NPWS and are responsible for briefing the incident management team and the Director General of NPWS on the progress of operations.

3.20.3 Duties

- Assess the ability to undertake wildlife operations;
- Obtain briefing from IMT and maintain effective communication with IMT;
- Brief DG of NPWS of operation progress;
- Specify information to be reported to the NPWS coordinators;
- Approve requests for additional resources and requests for release of resources;
- Authorise release of information on wildlife issues to media;
- Approve demobilisation;
- Release resources and supplies.

3.21 NPWS Policy Liaison Officer

3.21.1 Structure

The Policy Liaison officer is the Wildlife Management Officer from NPWS Head Office and will report to the NPWS Executive Committee representative.

3.21.2 Role

To provide latest NPWS wildlife policy advice to the ECR and the field.

3.22. Wildlife Media Liaison Officer

3.22.1 Structure

The Wildlife Media Liaison Officer(WMLO) will be appointed by ECR and reports to the Media Liaison Officer(MLO) for the incident and liaises with the ECR.

3.22.2 Role

The WMLO is responsible for the coordination of media requirements from the NPWS and media with regards to the wildlife response.

3.22.3 Duties

- Liaise with ECR;
- Liaise with MLO;
- Deal with all wildlife related media inquiries in conjunction with MLO;
- Develop daily media releases regarding numbers and species of animals captured, treated, released or have died or at risk for the oil spill;
- Provide accurate and timely information to Government and other bodies.

4.0 Rescue and Rehabilitation of impacted Wildlife.

4.1 Background

Sea birds appear to be the most frequent victims of maritime oil spills, however mammals such as seals, whales, dolphins and dugongs, and reptiles like sea turtles may also be impacted during spills.

There is no clear relationship between the amount of oil spilled in the marine environment and the likely impact on wildlife. For example, a small oil spill may impact on large numbers of wildlife, or conversely, a large spill may only impact a few individual animals. Important factors related to the impact of oil spills on wildlife are:

- the spread of the oil slick,
- the type of oil spilled, its movement and weathering characteristics,
- the location of the spill,
- the area of estuary, sea and foreshore impacted by oil,
- the sensitivity of the regional environment, eg proximity to bird breeding colony,
- the number of different habitats impacted, such as rocky shore, beach, mangrove, wetland and mudflat,
- the timing of the incident (during seasonal breeding, shorebird migration),
- the nature, toxicity and persistence of the oil,
- and the variety of species at the spill location.

(Australian Maritime Safety Authority 1999)

The types and numbers of animals impacted by oil will determine the resources required during a spill. Once wildlife have been impacted by an oil spill the NPWS has a legal obligation to provide timely and humane treatment and care of affected animals.

4.2 Level of Response

4.2.1 Birds

Often local wildlife care groups have had experience with treating oiled fauna and for small scale incidents (eg, less than 50 birds) can be used very effectively. However, for large scale incidents that impact thousands of animals requiring large facilities, hundreds of volunteers and thousands of litres of hot water a much larger response is required.

For the purposes of oiled wildlife planning, three levels have been nominated as a guide to the scale of wildlife (birds) response required:

Scale of impact	Criteria and response
Level 1- Minor incident: < 50 birds	<ul style="list-style-type: none"> • very few animals are affected or have survived the incident eg < 50 • species impacted are very common and protected • local resources (personnel and resources) can cope with scale of incident • little or no public or media concern • little or no likelihood of incident increasing in scale or severity
Level 2- Moderate incident: 50 – 200 birds	<ul style="list-style-type: none"> • over 50 animals may be impacted by oil but less than 200 • species may be common or threatened • substantial facilities, equipment and personnel are required • external resources required to support local resources • National Plan wildlife kits are required to support the response from interstate and from industry.
Level 3 - Significant incident is: >200 birds	<ul style="list-style-type: none"> • over 200 animals have been, or will potentially be, impacted by oil • species are considered threatened or on the protected species list • substantial resources are required over an extended period of operations • significant national wildlife response equipment is required from interstate and possibly international support.

4.2.2 Marine mammals and Turtles

Marine mammals (whales, dolphins and seals) and turtles can also be affected by oil spills.

If marine mammals are impacted by oil very little can be done to capture, clean and rehabilitate the animals.

Marine mammal incident procedures, outlined in the Management Manual for Marine Mammals in NSW (Smith 1997) (in local Area library), should be implemented if cetaceans strand or seals are impacted during an oil spill incident.

If Marine turtles are impacted by oil, refer to the NPWS Guidelines for Marine Reptile Strandings, Rehabilitation and Release in NSW. (on NPWS intranet or in local Area library)

4.3 Pre-emptive action to reduce wildlife impacts during an oil spill

The Wildlife Coordinator must interface directly with the Incident Control Team to determine the priorities of the response and the unfolding events of the oil spill eg continuing releases from a vessel at sea.

Pre-emptive action may be required to reduce the impacts on wildlife during the response for example capturing fauna in an area likely to be impacted, or stopping wildlife feeding in the areas affected by the spill. This will minimise the wildlife casualties and reduce the need for oiled wildlife cleaning and rehabilitation.

The positive and negative outcomes of pre-emptive action need to be considered by the Planning Section: Environment Unit of the incident before they are used.

Pre-emptive actions may be required in the following circumstances:

- Prevent non oiled birds from entering oiled regions;
- Prevent animals accessing contaminated food supply;
- Prevent predators accessing oiled dead animals on foreshores;
- Keep sea birds, mammals and turtles away from oil slicks at sea;
- Keep sea birds, mammals, turtles and fish away from chemical dispersant application operations.

These pre-emptive activities may include fencing off seals in haul-out areas, capturing seabirds along foreshores, trapping penguins near nesting sites etc. The use of bird and animal scarers should be considered to keep wildlife away from the contaminated areas.

4.3.1 Bird and Animal Deterrents and Scaring Devices

It may be necessary during a spill to undertake pre-emptive activities to minimise the impact of a spill on wildlife in an area. Useful devices are bird deterrents and scarers.

A range of species may be encountered in a spill response and may also be wide spread through different environments eg. whales at sea, birds near a rookery, seals in a haul-out area, nesting areas in dense mangrove stands etc.

The appropriate deterrent or scarer needs investigation so that the right technique can be determined for the right species and in the right application.

There are a range of deterrents and scaring techniques available:

- gas operated devices,
- sirens,
- strobe lights,
- guns,
- balloons,
- falconry & predator models,
- flagging,
- reflectors, and
- high frequency sounds.

Note: It must be remembered that where hydrocarbon vapours exist a potential flammability or explosion hazard may exist. Devices that can cause heat or electrical sparks should not be used eg shot guns, electrical lights which are not inherently safe.

5.0 Procedures for setting up facilities for oiled birds

5.1 Introduction

There are very few comprehensive bird rehabilitation facilities in NSW. It is likely that oiled birds will need to be rehabilitated in facilities that do not normally cater for large numbers of birds.

First aid, cleaning and rehabilitation facilities will need to be established. The number of oil affected animals will determine the size of the facility required. Early in an oil spill incident it will be difficult to determine how many animals may have been affected. It is important to select a facility or site that can be scaled up quickly if necessary. Local council playing fields with change rooms, which have hot water and power, may be suitable for large incidents.

5.2 Criteria for Selection of Suitable Treatment and Rehabilitation Sites

Regions should plan for incidents by identifying adequate facilities using the following criteria. The more criteria met, the more suitable the facility:

- Close to the spill to avoid prolonged transport (less than 1 hour);
- Adequately qualified staff available (vets, wildlife carers, keepers);
- Unlimited supply of hot water (very important);
- Electricity and telephones;
- Pool facilities or ability to erect portable pools;
- Drying rooms (eg shipping containers, tents, buildings) and heaters;
- Established avian enclosures or ability to construct these quickly (eg portable shade houses);
- Built facilities, eg warehouses, or large area to erect 'tent city';
- Security and public access;
- Waste water and solids collection, removal or disposal.

For detailed information refer to Appendix D – Field Manual: Rescue and Rehabilitation of Oiled Birds, by Erna Walraven, Taronga Zoo.

Facilities for the following activities need to be determined:

- Check in /out (registration)
- Triage & First Aid (vet hospital)
- Washing and Drying
- Rehabilitation and Feeding
- Animal food preparation and storage
- Quarantine areas/intensive care
- Autopsy/dissection
- Administration, communication, media liaison & records
- Volunteer training/briefing
- Equipment stores
- Personnel washing, feeding, toilets, first aid etc.

5.3.1 First Aid Facility – minimum requirements

An emergency wildlife first aid facility must be set up on-site as soon as possible. This should be done away from the main activity and noise, but have easy access.

If built facilities are not available, two large marquees (Min 4m x 4m) should be erected at the first aid site; one as a holding area for untreated birds and the other to house birds in boxes awaiting transportation to the cleaning and drying facility.

5.3.2 First Aid Equipment required

- Minimum of two marquee/tents (4x4 metres) with sides
- Cardboard boxes with lids and breathing holes (not waxed boxes)
- Rags to wipe off excess oil
- Water based eye drops
- Thermometers for cloacal temps
- Tressle tables
- Cotton ponchos to prevent birds ingesting oil through preening feathers (pillowslips with corners cut out)
- Bins and plastic bags to hold oil contaminated rags
- Gastric tubes, 3mm, 5mm and 8mm gauge
- Buckets
- Scissors
- Masking tape
- Syringes, 1ml, 2ml, 5ml, 10ml and 20ml
- Oral fluids (Lectade or Vy-trate)
- Lethobarb
- Record sheets (G) and pens

5.4.1 Cleaning and Drying Facility

The cleaning facility should be under cover (tent, shed, etc), however if the weather is fine, birds can be washed outside during the day (under lights at night).

Storage containers should be available near the cleaning facility to hold contaminated water before appropriate disposal.

The drying facility should be a closeable tent or room heated to between 35 – 40 degrees Celsius. When the bird is clean and dry it should be moved to the rehabilitation facility.

Provision of unlimited hot water is often the limiting factor in any oiled wildlife cleaning operation. Instantaneous gas hot water systems are the best option for continuous hot water delivery. At present most ablution block hire companies do not have instantaneous systems installed, however in the case of a spill with hundreds of birds effected temporary gas hot water systems can be installed.

5.4.2 Cleaning and Drying equipment required

- Unlimited hot water (gas instantaneous hot water systems are best)
- Closeable tent or heated rooms
- Washing tubs large enough for a pelican, Hydrobaths as used for dog washing are good
- Shower nozzles
- Detergent (eg Dawn ®)
- Towels
- Thermometers
- Trestle tables
- Rubber gloves
- Plastic or water proof coveralls
- Goggles
- Buckets
- Heaters
- Non slip flooring in wash room

5.5.1 Rehabilitation Facility

Indoor and outdoor facilities will need to be established as detailed below.

5.5.2 Indoor housing

Indoor housing will be required for birds recently cleaned and dried. Indoor housing should be 25-28 degrees celsius. As birds become stronger, temperatures can be matched to outside, before moving birds to outdoor housing. Facilities for provision of food and water must also be available.

Indoor pens can be constructed of cloth or hessian covered wire, plywood, fibreglass or other available materials. Netting or shade cloth can be used to cover the top of the pen. Using uncovered bird wire can cause damage to wild birds and should not be used. Pens can be constructed in all shapes and sizes but must comply with the following:

- Be large enough to allow birds to stand up and stretch wings and neck freely;
- Have no sharp protrusions inside or out;
- Protect the animal from rain, draughts and predators;
- Allow for adequate ventilation and light; and
- Contain appropriate food and water.

5.5.3 Outdoor housing

Outside facilities should be provided for rehabilitated birds that only need to build up condition, muscle tone, and regain waterproofing. These facilities need to be larger than those for inside and should consist of an appropriate number of pens/cages with water access.

Cages should be large enough to allow birds to fly, with the exception of large pelagic birds such as albatrosses, gannets or boobies which are unlikely to fly in captivity.

All cages and pens should contain a pool of some sort to allow the birds access to water. Many waterbird species will only preen (a necessary process for the realignment of the feather structure assisting the insulation and waterproofing of the bird) while sitting on the water.

Children's swimming pools can be used for smaller species like ducks, gulls and terns. Larger pools are ideal providing the birds cannot escape or predators get in. Pools can be constructed from plywood and heavy duty plastic as a lining. Pool water should be reticulated and clean.

High perches, leafy branches, artificial burrows, emerging rocks from the pool or floating platforms should be supplied to the enclosure depending on the species.

Fresh water can be used in the pools for marine and estuarine birds in the short term. After extended periods in captivity some species require salt which can be added via the diet. (refer to Appendix D and E for detailed information)

5.5.4 Rehabilitation Equipment required

- wildlife food (for details on type/quantities refer to Appendix D and E)
- Suitable cages, both indoor and outdoor
- Swimming pools
- Floating platforms
- Suitable flooring
- Cardboard boxes
- Towels
- Trestle tables
- Masking tape
- Pens
- Scissors and knife

6.0 Wildlife Procedures during an Oil Spill Response

6.1 General Flow of Wildlife Response

Generalised Flow Diagram of Wildlife Response (AMSA)



6.2 Search and Rescue

The aim of search and rescue is to find and catch injured animals as quickly as possible and deliver them to the First Aid Facility while minimising distress and further injuries.

6.2.1 Searching

The size and location of the spill will determine the search area to an extent, as animals may pass through an oil spill while going about their daily routine and then return to roosting or breeding areas many kilometres away.

Local Regions, as part of their Incident Response Procedures, should identify important colonies or roosting areas for wildlife and also determine foraging distances from these areas. This will help determine the extent of the search area.

Local people, especially commercial operators (eg Dive boats, whale/dolphin watch boats and fisherman), should be asked to keep a look out and report oiled fauna.

6.2.2 Rescue

Capturing oiled birds should be done quickly, as prolonged pursuits may cause further damage or distress.

Rescue will be carried out by Rescue Crews (see section 3.4) Each Rescue Crew will be assigned a search area and will locate wildlife in this area in liaison with shore cleaning and other crews that may come across impacted wildlife.

The Rescue Crew will:

- Capture all animals requiring treatment;
- Collect dead animals;

- Record information on Oiled Wildlife Response Individual Animal Rescue - Release Form for each animal;
- Take photographs of affected wildlife;
- Collect samples of oil where affected wildlife is found;
- Tag all animals captured (or the bag the animal is in) and take them to the appropriate Triage/First aid facility.

Further rescue information

- Shoreline cleaning crews are likely to find oiled animals first. Liaise with these teams regularly.
- Rescue crews should work in groups of two to four people.
- Rescue crews will also have a Recording Officer attached to the crew who is responsible for recording and photographing effected wildlife.
- When wildlife is captured it should be placed in a cardboard box with lid or a cotton bag and tied off with rope and tagged with species name, rescuer, location and time.
- If animals are not in boxes or cotton bags, temporary numbered plastic leg bands can be placed on animals legs and details recorded on an Oiled Wildlife Response Individual Animal Rescue - Release Form (Appendix G).
- Every animal collected, including dead ones, must be delivered to the First Aid Facility.
- Rescue crews using boats should have at least three people, including a one designated as the driver who must be licensed appropriately.
- Personnel handling wildlife must have current Tetanus vaccination;
- Rescue crews in boats must only use appropriate vessels provided through the Marine Unit (eg some oil types may ignite from spark of petrol motor.)

6.2.3 Equipment required

- Personal Protective Equipment (relevant Australian Standard for oil/chemical spilled):
 - Rubber gloves
 - Plastic or water proof coveralls or plastic aprons
 - Goggles
- Long handled nets
- Casting nets
- Towels
- Boxes and cotton bags
- Ponchos
- Recording sheets, Tags/labels and pens etc
- Camera

6.3 Triage and First Aid

Rescued wildlife will need to be assessed as to whether rehabilitation is suitable. Initial assessment may be conducted at rescue scene or at the First Aid Facility depending on the distances involved. Wildlife should be assessed on the basis of physical condition and conservation significance. Assessment should be undertaken by a veterinarian.

The Triage crew will assess each animal, recommend appropriate treatment and assign it to one of the following priorities for treatment.

6.3.1 Priority of Treatment (Triage)

Priority One:

- Species listed on the schedules of the Threatened Species Conservation Act;
- Migratory species listed on the JAMBA and the CAMBA
- Culturally significant species;
- Animals with a good chance of rehabilitation.

Priority Two:

- Animals showing severe signs of toxicity such as convulsions;
- Animals with additional injuries such as fractures;
- Common species.

Priority Three:

- Low or no chance of survival and will require euthanasia by veterinarian

Local NPWS Regional Incident Response Procedures should list relevant species (refer to Appendix H)

6.3.2 Wildlife First Aid

All wildlife will be treated in order of priority established during triage.

Basic treatment required will include:

1. Clear eyes, nostrils and mouth,
2. Wipe oil and water off bird,
3. Weigh,
4. Take cloacal temperature,
5. Apply water based eye drops,
6. Give oral fluids,
7. Cover with cloth poncho and put in box,
8. Transport to cleaning facility.

(Refer to Appendix D and E for more information)

Further information

- Volunteers and staff will be assigned to crews of four.
- Every animal and details collected/treatment must be recorded on a Oiled Wildlife Response Individual Animal Rescue - Release Form(Appendix G).
- Every animal must have a masking tape leg tag or plastic poultry leg band attached with species, shift number and animal number corresponding to the Oiled Wildlife Response Individual Animal Rescue - Release Form.

Triage

- The triage crew perform triage and euthanasia.
- Euthanised animals will be recorded on an incident form, bagged and stored in freezer until Investigation Unit clears them to be disposed of.
- Each triage crew will have NPWS staff member with good bird identification skills as team leader and also contain at least one vet, vet nurse or other appropriately trained individuals.

First Aid

- Each first aid crew will comprise NPWS staff and volunteers with appropriate experience and training to treat and handle oiled fauna.
- The first aid crews treat birds on a priority basis provided by the triage crew.

The first aid crews must ensure that animals are warm and stabilised before transport to the cleaning facility, and that each has retained its identification band and poncho.

Equipment refer to 5.3.2

6.4.1 Transportation

All animals will be transported as quickly as possible, with a minimum of stress, to a cleaning and drying facility once they have been assessed and received initial first aid. Depending on the location of facilities, transportation may be short, requiring boxed wildlife to be carried by hand, or a long trip of many kilometres requiring vehicles.

See section 3.6 for information on Transportation crew role and duties.

6.4.2 Equipment required

- Suitable vehicle
- Gloves
- Safety goggles
- Cages
- Boxes with adequate ventilation and stacked to allow adequate ventilation
- Pens
- Masking tape
- Scissors

Further information

- The first aid crew will indicate which animals are fit for transport.
- The Oiled Wildlife Response Individual Animal Rescue - Release Form for each animal must accompany that animal.
- Transport crew leader must advise the Rehabilitation Divisional Commander of the estimated time of arrival of each batch of animals and the number of animals.
- Care must be taken that animals do not get too hot or cold during transport. Veterinarian advice must be sought.
- Adequate ventilation must be supplied for the animals to breathe but not chill. If packed too tightly animals may asphyxiate.

6.5.1 Cleaning and Drying wildlife

The cleaning process for each oiled bird may take up to 1 hour and will require two people for each bird. Therefore, to just clean 100 birds in a 12 hour day may require up to 18 people each day.

The basic steps for cleaning oiled birds are:

- Wash in warm (39-40 degrees C) water with mild detergent (Refer to Appendix D and E for recommended detergents) that is not absorbed by feathers.
- Rinse in warm water.
- Dry bird using clean rags, towels or paper towels.
- Drying can be assisted with the use of fan heaters (NOT hair dryers).
- Depending on the degree of oiling, two or three washes or more may be required over several days.

For detailed information, refer to Appendix D and E.

Equipment refer to 5.4.2

Further information

- Crews will receive written instructions from the triage and first aid crews with the animals.
- A veterinarian will be required to provide advice when needed.
- As soon as the animal is clean it should be transferred to the drying crews.
- Use of normal cloth towels for drying is best and can be hired and dry cleaned.
- Crews are to ensure that leg tags remain attached and are correct.
- Any oil contaminated water, towels or ponchos should be disposed of appropriately (refer to Section 6.8).

6.6.1 Rehabilitation of wildlife

The aim of rehabilitation is to provide wildlife with the required food, water, shelter and other conditions needed for their recovery and eventual release.

The rehabilitation process begins after the animal has been treated, cleaned and dried and will continue for the longest period of time, possibly extending to weeks or months.

Care must be taken not to tame or humanise wildlife during the rehabilitation phase or successful release back into the wild will be difficult.

When birds are clean and dry they should be placed in indoor housing, provided drinking water and appropriate food, and slowly acclimatised to outside temperatures. Outside holding areas must be established with access to water for swimming and exercising.

The stress of captivity on wild animals can lead to a range of disease problems. Veterinarians are required for all oiled wildlife incidents. Animals must be assessed initially and monitored during rehabilitation by a veterinarian or professional wildlife keeper to ensure animals are healthy or receive any necessary treatment.

Further information

- Accurate and complete records of treatment, death or other information must be maintained for future reference.
- Professional keepers may be required for large incidents.
- Refer to Appendix D and E for further information.

6.7.1 Release of wildlife

There are different release protocols for different wildlife species that have been held in captivity for some time.

Animals should preferably be released at the site where the animal was captured but if this is not possible then a suitable release site is one where other members of the species are present or have been observed recently. Other considerations for suitable release sites include habitat similar to the capture site and availability of food supply.

The timing of release and the location of release may be critical for that species. Releasing an animal in another's breeding territory may cause problems as could release of migratory animals after the migration period.

Migratory waders for example may be severely compromised by an extended period in captivity, resulting in a loss of muscle tone and stamina, which will affect their fitness for the long migration flight home. Further, migratory birds may be affected by missing other flocks of that species during seasonal migration if not released at the appropriate time.

Breeding patterns are another consideration. Species with small global populations may be permanently affected by failing to reproduce at an appropriate time in one breeding season.

It is recommended that all animals should be released as close to site of capture so long as the region is free of oil, and biologists and relevant authorities are consulted regarding the best technique and timing for release of captive animals.

Release sites and timing of release, must be approved by a NPWS representative.

6.7.2 Birds are ready for release when:

- they are recovered,
- their plumage is fully waterproof,
- they are not, or near, moulting,
- they can recognise their natural food and are eating well,
- they are within weight range for the species, and
- they are banded.

6.7.3 Before release all birds must be:

- checked by a veterinarian to assess waterproofing, recognition of natural food, condition, fitness and weight. A faecal test must also be conducted.
- banded using Australian Bird and Bat Banding Scheme bands. Please contact the Banding Office in Environment Australia on 02 6274 2407 for authorisation and bands.

6.7.4 Birds unsuitable for release

Birds must not be released if they are;

- handicapped with a permanent or long-term disability which could reasonably be assumed to preclude them from leading a normal life and surviving in the wild;
- suspected to carry a serious disease or a disease which is likely to be transmitted to the detriment of populations of habitat.

Birds unsuitable for release are to be euthanased or may, in exceptional circumstances, be brought into permanent care. Refer to NPWS Field Management Policies – Rehabilitation of protected fauna.

For detailed information on rehabilitation and release refer to Appendix D and E.

6.8 Waste disposal procedures

The cleaning process for oiled wildlife can produce large amounts of contaminated waste requiring specialist disposal procedures.

Oil is a HAZMAT item, before disposal contact NSW Fire Brigade. In a large incident the Combat Agency will have a Waste Management Unit in the Operations Section.

6.8.1 Oiled and contaminated water, rags and towels

Waste water containing detergents and oil residue can be hazardous to the environment. Consultation with local authorities must be undertaken to dispose of, or treat, polluted water.

Oil is a HAZMAT item, before disposal contact NSW Fire Brigade. In a large incident the Combat Agency will have a Waste Management Unit in the Operations Section.

6.8.2 Dead wildlife

Dead wildlife pose a contamination risk to humans and other wildlife. Immediate refrigeration is recommended so that samples and specimens may be taken for pathological studies. After post mortems have been conducted and appropriate samples taken, carcasses may be frozen until disposal.

Museums and universities may be interested in obtaining specimens for research. If there is no scientific interest, dead carcasses must be disposed of by a sanitary landfill method. Consultation with the local government waste authority must be undertaken.

Oil is a HAZMAT item, before disposal contact NSW Fire Brigade. In a large incident the Combat Agency will have a Waste Management Unit in the Operations Section.

6.9 Occupational Health and Safety (OH&S)

For a level 2-3 operation:

- An Occupational Health & Safety Officer (OHSO) will be appointed for the for spill incident OH&S management.
- An OH&S plan will be developed for all activities of the response.
- A Site Safety Officer should be appointed for Wildlife Rehabilitation Centre - responsible for ensuring a safe and healthy work environment for staff and volunteers at the centre. Preferably this person should have some understanding of zoonotic diseases and wildlife handling.
- Trained first aid officer(s) should be appointed for deployment at incident sites & wildlife treatment/care centres.

Depending upon the scale of the incident first aid station(s) may be established.

The following is a guide to OH&S considerations in oiled wildlife response.

- All staff will work in accordance with the OH&S Act 2000 and the Regulations of 2001.
- All staff will also work in accordance with the specific roles and responsibilities of the NPWS OH&S Risk Management Policy of 2002 (refer to NPWS Intranet or local NPWS office library).
- All tasks will have a JSA (Job Safety Analysis) produced.
- A JSB (Job Safety Brief) for all staff will be conducted on the appropriate JSA prior to any work commencing.
- The relevant supervisor will provide Material Safety Data Sheets (MSDS) for all staff as part of the JSB prior to commencing. The MSDS will be provided to supervisors in the Incident Action Plan.
- Appropriate personal protective equipment (PPE) will always be provided to staff. PPE required will depend on type of spill and details in MSDS.
- Ensure all accidents and near misses are recorded and reported to supervisors using the Accident Near Miss Report Form (OH&S Risk Management System document).

- Establish procedures to minimise risk of infection,
- Maintain lists and display contact details for Ambulance, Fire Brigade, Poisons info centre, Police etc.
- Always undertake regular risk assessments.
- Establish evacuation procedures for all sites early in the activity.
- Ensure at each work site containing flammable substances, that an appropriate fire extinguisher is to be available.

Remember: Not all wildlife is “friendly” or captured easily!

The “survival instinct” of some animals, if threatened by humans, could be a serious OH&S issue for rescuers. Aggression also features prominently in some animal species as a way of establishing and maintaining social hierarchy, reproductive activities, breeding and maintenance of territories.

6.10 Hygiene and Quarantine Issues in Wildlife Response Planning & Operations

When large numbers of birds and/or other animals are confined in close proximity to each other the spread of disease is likely from animal to animal or to/from humans. This includes Salmonella bacteria or Ornithosis that can spread from birds to humans when working in confined spaces.

In the US in 1991 after the spill of the tanker Tenyo Maru, almost 80% of the 700 seabirds treated died in captivity from a lung infection caused by the fungus Aspergillus. The primary cause was poor air exchange in the rehabilitation centre.

Any animal that is suspected of carrying an infectious disease should be immediately quarantined from others.

It is essential that all staff and volunteers are informed of quarantine requirements and that appropriate signage is available.

It is important that procedures for disinfecting clothing and equipment are set up early in any wildlife response.

Footbaths with antiseptics should be set up outside buildings housing wildlife, separate and dedicated clothing, gum boots, gloves, other PPE should be available as well as these areas restricted to “authorised personnel” only. Appropriate signage should be posted.

Personal hygiene for staff eg. portable toilets and hand washing areas should be provided. It is essential all staff wash up thoroughly before eating, drinking or smoking. These areas should be set up away from the wildlife, quarantine, cleaning, treatment and rehabilitation areas.

The NPWS Infectious Diseases Manual (1997) should also be referred to and on hand at any oiled wildlife incident.

6.11 Criteria for Scaling Down or Demobilising Wildlife Response

The criteria for demobilising or scaling down the wildlife response should take into account the total spill response. An assessment should be made of the following:

- Is the spill from the source likely to continue?
- Has the vessel been removed from the site?
- Is a quantity of oil still mobilised on sea or on shore?
- Predicted trajectory of oil slicks at sea,
- Likelihood of oil impacting that region or site,
- Frequency of new oiled wildlife being rescued and cleaned,
- Populations and species under threat,
- Current welfare of captive wildlife,
- State of clean-up of any oiled wetlands, shorelines or islands.

The contents of any oiled wildlife kit used during a response (National Plan, State, Agency or Industry kit) should be reassessed after a spill and restocked if required.

7.0 Law Enforcement procedures for oiled wildlife incidents

The NPWS Senior Investigator and the NPWS Principal Legal Officer will liaise with the Environment Protection Authority and/or the relevant Port Corporation (the agencies responsible for the investigation of pollution offences associated with an oil spill). The NPWS, EPA and Port Authority will consider whether a joint investigation will be conducted (and which agency will lead the investigation) or whether separate co-ordinated investigations will be undertaken.

Generally the EPA or Port Authority will lead an investigation relating to an oil spill and the NPWS will provide assistance as agreed. In these circumstances details of the harm caused to protected fauna may be presented to the court as a factor relevant to the seriousness of a pollution offence rather than forming the basis of a separate prosecution. However, in cases involving harm to threatened species, populations or endangered ecological communities, or their habitats or critical habitat, consideration will be given to prosecuting these offences in addition to pollution offences.

When an oil spill is detected the NPWS Executive Committee Representative shall contact the NPWS Senior Investigator as soon as possible.

The Senior Investigator should assist in the briefing of staff assigned to detect and treat injured fauna.

7.1 Recording Officer

The recording officer will accompany the wildlife rescue crews. The recording officer is responsible for:

- collecting field samples;
- collecting photographs;
- applying all labels to samples and fauna; and
- completing Oiled Wildlife Response Individual Animal Rescue - Release Forms.

Note: Oil samples may not need to be collected by NPWS staff if EPA or other authorities are undertaking this task.

When injured fauna is detected the recording officer will either;

1. Isolated animals

Complete an Oiled Wildlife Response Individual Animal Rescue - Release Form for each animal. This entails labelling the animal, taking photographs in situ and closeup, obtaining oil samples from the coat of the animal and from the surrounding environment, and completing the form.

2. Cluster of animals

Complete at least one Oiled Wildlife Response Individual Animal Rescue - Release Form and maintain a daily record of associated exhibits every day. The Oiled Wildlife Response Individual Animal Rescue - Release Form will serve as an important representative sample. Notes should be made of all the identification label numbers, the species and a tally of the species as they receive treatment. Where many animals have been injured, photographs showing the extent of the damage must be taken or, preferably, a video taken of the incident site and injured fauna.

7.2 Recording

The following details are required to be recorded for law enforcement purposes.

1. Oiled Wildlife Response Individual Animal Rescue - Release Forms (Appendix G)
2. Labels of oil samples.

These labels are to contain the date, the sample number, the species, if the oil is taken from an animal's body and the geographic location of the sample.

7.3 Samples

The chemical composition of crude oil breaks down quickly. Therefore it is imperative to obtain oil samples as quickly as possible after the incident occurs.

- Oil samples are to be placed in glass containers.
- Plastic is not suitable as these chemicals will interact with petroleum products.
- The samples may be stored at room temperature.
- While on a boat, place samples in a foam esky.
- All sample collection material such as glass jars and cloth rags must be clean and not used previously, in order to avoid the contamination of samples.
- The recording officer should wear disposable gloves, in order to avoid cross contamination of samples.

7.4 Exhibits

- The recording officer is responsible for securing and lodging all exhibits, ie exhibits must not be left unattended and must be lodged at the end of the shift with the nominated officer (possibly the Senior Investigator).
- Film will be lodged with the nominated officer after it has been developed.
- The nominated officer is responsible for storing and recording all original exhibits during an oil spill incident.
- All fauna record keeping sheets are to be photo copied. The original is to be handed to the nominated officer and a copy retained by the recording officer.
- Undeveloped film is to be processed by the recording officer. One set of photographs are retained by the recording officer and another set, along with negatives, is to be labelled and forwarded to the nominated officer.
- Original labelled videos go to the nominated officer.
- Labels for photographs and videos are to include the date, the location and the recording officer.

- All biological samples are to be lodged by the recording officer with the nominated officer and stored in a secure, lockable room. Access to this room is to be limited.
- All biological samples are to be recorded chronologically on the 'Register of Fauna Samples'. This Register is to record the time and date the samples were lodged, the sample number and the Recording Officer and their signature.
- Transfer details are to be recorded including the date, the time, the reason why samples were moved and who took them (and their signature).
- The 'Register of Fauna Samples' is retained and completed by the Nominated Officer.

7.5 Equipment required

- Plastic identification labels
- Oiled Wildlife Response Individual Animal Rescue - Release Forms
- Gloves
- Biological sample containers
- Cloth rags
- Camera or video camera

8.0 Volunteer Management (adapted from AMSA)

In the event of a large oil spill, large numbers of people are required to assist in the rescue and rehabilitation of oiled wildlife. The NPWS could not possibly undertake such a large operation using its own staffing resources.

AMSA, who administer the National Plan have indicated that volunteers will be paid by the National Plan funding arrangements.

8.1 Possible roles for volunteers

It takes a significant dedication of skill, time and money to provide the necessary treatment and care for oiled wildlife. The role of the volunteer is vital to a large spill event causing major wildlife impacts.

The roles and responsibilities of volunteers in an oiled wildlife response will depend on existing personnel resources, and the scale of the spill event, but may include:

- assist rescue/capture on foreshores & on-water of injured and oiled wildlife,
- assist in transportation of captured wildlife to Wildlife Treatment & Rehabilitation Centre (WTRC),
- assist veterinary staff in initial triage of captured wildlife,
- assist in washing and drying of oiled wildlife,
- preparation of specialist food and the feeding of captive wildlife,
- assist in animal husbandry and care of wildlife during rehabilitation,
- recording & documentation,
- assist in wildlife banding and release activities,
- assist in wildlife handling and cleaning of enclosures,
- log-in/out of wildlife and personnel into the WTRC,
- assist staff in animal quarantine procedures and disease control,
- maintain registers and rosters of personnel,
- support administration and clerical officers in WTRC,
- support communications at WTRC eg telephone, radio etc.
- coordinate wildlife records to provide information on total animals at each stage and for SITREPS and media releases,

- support logistics in WTRC eg food, equipment acquisition, set up, cleaning and maintenance etc.
- maintenance of pools for marine life and test swim pools for oiled birds,
- post spill monitoring of release wildlife eg breeding, feeding, recovery.

8.2 Advantages of Local Volunteers

It is preferred that volunteers are sourced from the local region or community affected by the spill for the following reasons:

- local volunteers normally have a strong sense of ownership of the problem,
- local volunteers may have a good local knowledge of wildlife diversity, wildlife location, feeding habitats, foreshore type and access etc.
- own accommodation relieves pressure of influx of other personnel,
- local volunteers will also have ownership of a regional problem and of course a keen interest in a quick and effective resolution,
- local volunteers are more likely to be available for the duration of the response therefore the training effort is maximised.

Taronga Zoo maintains a database with contact details of NPWS personnel and volunteers they have trained in oiled wildlife rehabilitation. In the event of an oil spill Taronga Zoo must be contacted immediately.

8.3 Volunteer selection process

It must also be remembered that not all volunteers have the aptitude to undertake this form of work, therefore there is a need to establish a volunteer selection process that identifies competence, confidence and skills.

The selection process needs to address:

close assessment of physical capabilities eg field, indoor, desk activities,
 registration and workers compensation requirements,
 general health condition and level of disease immunity,
 occupational health and safety requirements,
 briefing of individual responsibilities, legal issues, operational organisation, who to report to etc.

(Refer to Appendix G - volunteer registration form)

8.4 Guidelines for the Management of Volunteers

A generic volunteer registration / agreement form has been prepared by AMSA for use by State/NT agencies during an oiled wildlife incidents or for the pre-registration of volunteers to determine training requirements. Refer to Appendix G

It is also recommended that:

- on arrival, volunteers must register and be provided with safety, first aid and legal briefing,
- volunteers must register as individuals not organisations,
- for safety and legal considerations must wear a badge identifying them as registered volunteer,
- volunteers must be aware of the command structure and who's who in the response,
- volunteers must ensure hygiene standards are followed,

- all must be registered on a roster system and sign on/off each day,
- a dedicated phone line for volunteers must be established,
- volunteer must take adequate rest and meal breaks,
- volunteers must not speak directly to media.

8.5 Counselling of Wildlife Response Personnel

The emotional impact on personnel, especially volunteers, of dead and dying wildlife may be such that counselling be considered as part of incident.

As the incident response exceeds one week the experience in Australia has been that physical and emotional fatigue may result in decreased effectiveness and increased probability of interpersonal conflict.

Media intrusion, adverse publicity and public anger may focus wildlife personnel attention on their own performance with potential self blame.

Personnel may feel “responsible” for the loss of wildlife during rescue/treatment or rehabilitation and this may require individual counselling.

The NPWS will determine if these services are required during an oil spill event.

8.6 Volunteer Briefing Material

Appendix G also includes a volunteer briefing hand out that has been prepared by AMSA as a guide for State/NT agencies.

It highlights important information for all persons who wish to be assessed as volunteers, including, that they are briefed on the likely physical requirements of the duties, safety aspects and possible dangers involved, their responsibilities and obligations as a volunteer.

9.0 Media Management

An oil spill incident will generate much media interest.

The NPWS needs to maintain a coordinated response from the rehabilitation centre on site.

The Wildlife Media Liaison Officer will handle activities only relating to wildlife management, all other inquiries regarding the extent, source and composition of the spill and clean up operation should be referred to the lead combat agency. Refer to Section 3 in the manual for details of WMLO role.

9.1 Media guidelines

- A media team should be established with media officer's at each key location.
- All media inquiries must be directed to the media officer.
- Access by the media to the rehabilitation centre should be at set times.
- All media on-site should be accompanied by a media officer.
- Access to photograph injured wildlife must be approved by the Wildlife Coordinator
- The community is to be informed through media releases and/or public displays.

9.2 Information supplied to the Media should include:

- Potential risk to wildlife;
- Wildlife currently effected;
- NPWS role in the operation;
- A request to the community who are not involved as a volunteer to keep away from the rehabilitation centre due to risk of disturbing wildlife further and for public safety;
- A request for aircraft (including media) no fly zone to reduce risk of flushing birds into oiled areas;
- Contact numbers for volunteers or reporting oiled wildlife;

10.0 Training requirements for NPWS staff, other agencies and volunteers.

The handling and treatment of wildlife and the handling of hazardous materials (eg Oil) can be dangerous if undertaken by untrained personnel.

All NPWS staff and volunteer organisations (eg WIRES) that are likely to play key roles during an oil spill response should be trained in wildlife handling, rescue and rehabilitation of oiled fauna and introduction to ICS.

Many NPWS staff have skills and training in the incident control system under which an oil spill incident would be run.

Limited numbers of NPWS are currently trained or skilled in the rescue and rehabilitation of oiled fauna.

10.1 NPWS Staff training

All staff potentially involved in the implementation of these procedural guidelines should be familiar with, or trained in the following:

- The contents of these guidelines.
- National Plan to Combat Pollution of the Sea by Oil arrangements
- Incident Control System.
- The roles and responsibilities of personnel during oil spill response.
- Wildlife handling techniques.
- Washing, drying, rehabilitation, release and monitoring techniques.
- NPWS law enforcement responsibilities.
- Record keeping.
- The role of other agencies during an oil spill incident.
- Occupational Health and Safety.
- Marine Oil and Chemical Spill Response Course (non wildlife specific).

10.2 Volunteer organisations

Training should be made available to key members of the following nominated groups:

- Local wildlife carer groups;
- Veterinarians from NSW Agriculture, universities, and key coastal locations;
- Bird observer club members (Birds Australia)
- RSPCA

Training for volunteers should include the following:

- Wildlife handling techniques.
- Cleaning techniques.

- Safe handling of hazardous materials.
- Rehabilitation and release.
- The role of NPWS in the event of an oil spill.
- Introduction to the Incident Control System
- The role of volunteers in oil spill response.

10.3 Training providers

Zoos, sanctuaries and wildlife carer organisations throughout NSW have skills and training qualifications in many aspects of wildlife handling, rehabilitation and care. Very few organisations have vast experience with oiled wildlife.

10.3.1 Taronga Zoo

Taronga Zoo has the greatest experience in NSW of dealing with oiled wildlife and have produced a rescue and rehabilitation manual and also run training workshops.

Taronga Zoo Rescue and Rehabilitation of Oiled Fauna Training Workshop Objectives: The training workshop is designed to provide personnel with the necessary skills to deal proficiently with all aspects of fauna rescue during an oil spill. The workshop includes safety aspects, cleaning and rehabilitation techniques for the wildlife most likely to be effected by oil spills.

Workshop Topics:

- The effects of oil on wildlife
- Safety precautions for humans
- Requirements for staff training
- Bird identification and handling
- First aid and emergency treatment for wildlife
- How to clean birds
- How to care for wildlife during rehabilitation
- Release back into the wild
- Veterinary care and post mortem procedures
- Record keeping

All sessions are accompanied by videos, slides, overheads and practical demonstrations. Detailed course notes will be supplied to all participants.

10.3.2 Newcastle Port Corporation

The Newcastle Port Corporation hold Marine Oil and Chemical Spill Response Courses (non-wildlife specific).

Course content includes:

- Response priorities
- Oil and chemical response strategies, containment and recovery
- Environmental issues, dispersants, shoreline clean-up, land based spills storage and disposal of oil
- Decontamination of personnel and equipment
- Waste management of oil and material
- Safety of personnel and equipment
- Communications
- Offshore and beach equipment deployment exercises
- Case histories of oil spill incidents

- Liability and compensation
- Media awareness
- Syndicate and desk-top exercises
- Inspection of facilities and equipment

10.3.3 Port Kembla Port Corporation

The Port Kembla Port Corporation hold a similar course to Newcastle Port Corp but not as regularly. Please contact Port Kembla for specific details.

11.0 Useful Reference Material not included in Appendices

11.1 Video

Title, etc	NPWS Location
AMSA (2000), <i>Managing the Risk –Australia's National Plan to combat pollution of the sea by oil and other noxious substances,</i> . – Duration 12 minutes	NPWS HO Library
Qld Dept of Environment and Heritage (1996), <i>From Troubled Waters: A Training Video for the Rehabilitation of Oiled Birds Based on the Iron Baron Oil Spill in 1995,</i> - Duration 25 minutes	NPWS HO Library
Sydney Ports Corporation (1999), <i>Black Oil, Black Night: The Laura D'Amato Oil Spill.</i> Duration 18 minutes	NPWS HO Library
AMSA (2000), <i>Australia's Oil Spill Response Atlas,</i> – Duration 6 minutes	NPWS HO Library

11.2 CD-ROM

Title, etc	NPWS Location
NSW Dept of Transport (June 2001), <i>NSW Oil Spill Response Atlas Version 3.0</i> (Arcview compatible), CD 1 North Coast, CD 2 Sydney and South Coast.	Wildlife Management Coordinator, Directorate GIS Coordinators
AMSA, Oil Spill Trajectory Model (OSTM)	Down load from AMSA website
AMSA (200?), <i>Australia Mangrove Oil Spill Reports,</i> AMSA	NPWS HO Library
AMSA, (1996) <i>Fix-a-Slick – The oil spill clean-up simulation game.</i>	NPWS HO Library

11.3 Manual, papers etc

AMSA (1999), <i>Identification of Oil on Water: Aerial Observation and Identification Guide</i>	NPWS Flight Section, ParkOps, HPWS HO Library, Coastal Directorates – OSCU
AMSA (2000), <i>AMSA and the Environment – Information kit,</i> posters, brochures etc	NPWS HO Library
Hall, Elizabeth (2000) <i>Transport, Handling and Husbandry of Seabirds,</i> in The Fabian Fay Course for Veterinarian, 4-8 Sept 2000, Proceedings 335	Wildlife Management Coordinator, NPWS HO Library

University of Sydney.	
Hall, Elizabeth (2000) <i>Rehabilitation and Release of Seabirds</i> , in The Fabian Fay Course for Veterinarian, 4-8 Sept 2000, Proceedings 335, University of Sydney.	Wildlife Management Coordinator, NPWS HO Library
Taronga Zoo(2001), <i>Training workshop notes – Rescue and Rehabilitation of Oiled Fauna, Aprofessional Training program</i> , Taronga Zoo	Workshop participants, NPWS HO Library
Jessop, R. et al. (1993) <i>Regime for treating sick and injured penguins</i> . Philip Island Penguin Reserve	
NSW NPWS, (1997) Infectious Diseases Manual	NPWS offices
Please Note: Coastal Resource Atlases below are now superseded by the Coastal Resource Atlas on CD-ROM.	
Coastal Resource Atlas for Oil Spills in Trial Bay (1986)	NPWS HO Library, local NPWS Region
Coastal Resource Atlas for Oil Spills in Botany Bay (1989)	NPWS HO Library, local NPWS Region
Coastal Resource Atlas for Oil Spills in Jervis Bay (1989)	NPWS HO Library, local NPWS Region
Coastal Resource Atlas for Oil Spills in and around the Port of Newcastle (1989)	NPWS HO Library, local NPWS Region
Coastal Resource Atlas for Oil Spills in and around Port Kembla (1989)	NPWS HO Library, local NPWS Region
Coastal Resource Atlas for Oil Spills in and around Twofold Bay (1990)	NPWS HO Library, local NPWS Region
Coastal Resource Atlas for Oil Spills from Cape Dromedary to Cape Howe (1991)	NPWS HO Library, local NPWS Region
Coastal Resource Atlas for Oil Spills in Broken Bay, Pittwater and the Hawkesbury River (1992)	NPWS HO Library, local NPWS Region
Coastal Resource Atlas for Oil Spills from Point Danger to Clarence River (1992)	NPWS HO Library, local NPWS Region
Coastal Resource Atlas for Oil Spills from Clarence River to Smoky Cape (1992)	NPWS HO Library, local NPWS Region
Coastal Resource Atlas for Oil Spills in Port Jackson (1994)	NPWS HO Library, local NPWS Region
Coastal Resource Atlas for Oil Spills in Brisbane Water (1994)	NPWS HO Library, local NPWS Region
Coastal Resource Atlas for Oil Spills from Barrenjoey Head to Bellambi Point (1994)	NPWS HO Library, local NPWS Region
Coastal Resource Atlas for Oil Spills from Bass Point to Wheelers Point (1995)	NPWS HO Library, local NPWS Region
Coastal Resource Atlas for Oil Spills from Crowdy Head to Port Stephens (1995)	NPWS HO Library, local NPWS Region

NSW NPWS POLICY: RESCUE AND REHABILITATION OF OILED WILDLIFE

INTRODUCTION

Major oil spills have occurred in marine waters worldwide, including within Australian waters. When oil spills occur, they could potentially have a large impact on marine wildlife and local coastal environment. This has serious implications for marine fauna in Australian coastal waters, including marine mammals, reptiles and sea birds.

The National Plan to Combat Pollution of the Sea by Oil and other Noxious and Hazardous Substances (National Plan), administered by the Australian Maritime Safety Authority (AMSA) came into operation on 1 October 1973 and outlines national arrangements for response to oil and chemical spills at sea. The New South Wales Marine Oil and Chemical Spill Contingency Plan (MOCSCP) was developed to support the National Plan and to for oil and chemical spills in NSW State waters. MOCSCP is also a subplan to the State Disaster Plan (Displan). Under these plans, NSW Agriculture is the agency responsible for coordinating the response to animal welfare and rescue. NSW National Parks and Wildlife Service (NPWS) is identified as a participating organisation under NSW Agriculture and is responsible for providing support in animal care services and technical advice.

The NPWS holds the statutory responsibility for protection and conservation of native wildlife under the National Parks and Wildlife Act, 1974, Threatened Species Conservation Act 1995 and Land Management Regulation 1995. The Prevention of Cruelty to Animals Act 1979, administered by NSW Agriculture, also details responsibility for non-native animals. To carry out its responsibilities, NPWS needs to be prepared for immediate action in the rescue and rehabilitation of oiled wildlife.

AIM

The aim of the Plan is to outline NPWS's emergency response role and responsibilities for the rescue and rehabilitation of marine wildlife affected by oil or chemical spills and provide operational guidelines in the event of an incident.

SCOPE

This Plan applies to spills in NSW State waters, defined in MOCSCP as waters between the low tide line and 3NM offshore, prescribed port waters and the adjacent foreshore. It defines NPWS's response to the rescue, rehabilitation and protection of impacted wildlife in the event of an oil or chemical spill. Procedural guidelines developed to support this Plan outline NPWS management response to incidents by:

- identifying responsible authorities;
- identifying personnel roles and responsibilities;
- establishing organisational structure and operational procedure's for the rescue and rehabilitation of impacted wildlife; and
- identifying training requirements for NPWS staff, other agencies and volunteers.

POLICY

NPWS will protect, rescue and rehabilitate oiled wildlife, or wildlife under threat from a spill within the constraints of available resources and operational limitations, giving priority to rare and endangered species and species or populations of local significance. Rescued wildlife will be released as soon as practicable pending suitable habitat with minimal risk of recontamination and sufficient resources.

NPWS recognises that there are potential significant risks in the management of marine incidents and consider personnel safety for those attending incidents to be of primary importance.

ROLES AND RESPONSIBILITIES

The MOCSCP outlines responsibilities of the various State agencies, and clearly defines a response structure using the Incident Control System including a tiered system for assessing and responding to oil spills.

The Newcastle, Sydney and Port Kembla port corporations are the identified combat agencies in the MOCSCP and hold statutory powers in the area in which the incident occurs for the management of the response.

Under Displan, NSW Agriculture is responsible for administering humane care to injured wildlife during large scale incidents. NPWS is responsible for acting as a participating organisation under NSW Agriculture. Within this structure the NPWS may provide service through expertise, advice and resources to coordinate and carry out the rescue, protection and rehabilitation of wildlife.

Under the National Parks and Wildlife Act 1974 (NPW Act) the Director General of National Parks and Wildlife Service holds responsibility for native fauna. NPWS will be responsible for coordinating and managing the rescue and rehabilitation of native wildlife impacted by an oil or hazardous substance spill.

IMPLEMENTATION

This plan is to be implemented in conjunction with the National Plan, Displan, the State Agricultural and Animal Services Plan and MOCSCP.

The scale of the response will depend on a number of factors including the likelihood of impact on significant habitat, sites, animal populations and the degree of impact on individuals. Some species are less likely to be affected due to behavioural ecology and demographics. Local plans for significant wildlife populations and/or sites will be developed in accordance with this plan.

Notification/Deployment

In the event of an oil spill, the combat agency will contact NSW Agriculture who will give approval for NPWS to be contacted and incident response for wildlife to be initiated. The NPWS will then be contacted via the pager system asking for Park Operations. Should a report of an incident come to NPWS from elsewhere, the relevant Port Corporation should be contacted immediately. Upon the activation of MOCSCP this Plan will be activated.

Within NPWS, the normal incident notification procedures will be enacted once Park Operations have been notified. Liaison with NSW Agriculture will be established through agreed procedures and the NPWS Coordinator Wildlife Management will be notified. The situation will be assessed depending on the extent of the spill and likelihood of impact on wildlife.

Incident Control System Response Structure

The Incident Control System (ICS) is used in responding to marine oil spill incidents in accordance with the MOCSCP. The system makes provision for assistance from NPWS under the Operations and Planning sections. Trained and competent individuals from within NPWS will be appointed to coordinate the rescue and rehabilitation of oiled wildlife. A NPWS representative in the Operations section, Divisional Commander (wildlife), will be responsible for the following:

- Coordinating field operations for the rescue and rehabilitation of oiled wildlife;
- Establishing required wildlife rehabilitation centres;
- Maintaining records and information on observed and/or treated wildlife;
- Establishing parameters for resource deployment including scaling down and ending operations;
- Providing advice on, and ensuring compliance with, occupational health and safety regulations;
- Establishing law enforcement data collection and reporting procedures;
- Providing for effective communication with the media, through the Media Liaison Officer, on wildlife issues; and
- Reviewing wildlife response regularly with the Operations Officer of the Incident and Wildlife Liaison officer.
- Providing the Finance and Administration Officer with detailed records of costs associated with the response for cost recovery, where possible.

A NPWS representative in the Planning section will be responsible for:

- Collecting and analysing information on vulnerable wildlife distribution and likelihood of impact and identifying potential impacts;
- Developing strategies to prevent oiling of wildlife where possible;
- Planning requirements for rescue and rehabilitation procedures;
- Establishing a recording system for wildlife rehabilitation effort; and
- Advising on suitable areas for release of rehabilitated wildlife.

Expert advice may be sought, from the relevant individuals and agencies, on wildlife rehabilitation techniques and animal recovery and timing for release post-rehabilitation. Procedural guidelines will be developed detailing the rescue and rehabilitation effort for oiled wildlife. These will include:

- Methods of search and rescue;
- Criteria for rescue and release post-rehabilitation;
- Establishment of rehabilitation centres;
- Veterinary assessment;
- Procedures for cleaning oiled wildlife;
- Recovery process;
- Release;
- Disposal of dead wildlife; and
- Record keeping.

Local plans may be prepared as a guideline for the treatment of specific species or locally significant populations with special considerations.

Law Enforcement

Collection of samples is critical to law enforcement activity following an incident. The Divisional Commander (Wildlife) shall contact NPWS Legal Services Directorate for advice on procedures for collecting relevant information to support potential breaches of the NPW Act. Basic procedures for collection of such information from fauna affected by oil spill incidents will be developed by NPWS.

RESOURCES

The costs associated with responding to a marine oil spill are generally met by the polluter and in many cases individuals will be employed to assist with the response. In accordance with Displan arrangements, individuals attached to participating and supporting agencies, under the Displan arrangements, would assist with the response and be covered by their agencies' insurances. The costs of the response met by the agency would then be recouped from the polluter via the combat agency. The combat agency (Incident Controller) will decide if volunteers are to be used or whether assistance is to be employed through a contract labour hire company.

VOLUNTEERS

NPWS recognizes the valuable assistance provided by volunteers in incident management, particularly in events involving the rescue, rehabilitation and protection of wildlife. At all times personnel health and safety will take precedence over that of native wildlife requiring assistance.

NPWS is committed to effective management of potential health and safety risks associated with marine incidents and will determine the specified roles and tasks that volunteers may undertake, considering levels of training and experience, with a view to minimising the risk of injury or illness.

All volunteers will be required to sign a register, to sign on and off the incident site during working shifts and will be under the supervision of a NPWS officer at all times. Volunteers will be afforded the same consideration for safety, training and equipment appropriate to their assigned tasks as that provided to NPWS staff in the same roles. The NPWS will cover liability for individual volunteers in these circumstances and volunteer organizations provide liability cover for their members.

TRAINING

The aim of training is to increase skills, experience and knowledge for future incidents and to develop contacts between experts and likely key personnel.

Training workshops will be held for staff and volunteers in wildlife rescue and rehabilitation. Training courses and experience in actual incidents should be encouraged for volunteers involved in spills. Training and experience should be mandatory for staff in senior positions in an spill incident response team. Training courses may be organised by Park Operations or the Coordinator Wildlife Management.

Opportunities should be provided for NPWS staff to attend oil spills anywhere in Australia to gain experience in crisis management and specific issues related to spill management. Such training opportunities will be coordinated by the Wildlife Management Coordinator.

EQUIPMENT DISTRIBUTION

Equipment for wildlife rescue and rehabilitation will be provided and maintained under the National Plan. NSW Department of Transport (DOT) will ensure that the kits are maintained and kept in secure storage. Wildlife kits will be maintained at two sites in NSW (Munmorah and Taronga Zoo) and will contain sufficient equipment/resources to begin the required rehabilitation effort. A list of equipment and resources available through NPWS will be maintained through the Incident Equipment Database held in Fire Management Unit with copies to the Coordinator Wildlife Management.

LEGISLATIVE AND POLICY CONTEXT

Primary Legislation

- *State Emergency and Rescue Management Act 1989 (SERM Act)*

Secondary Legislation

- *National Parks and Wildlife Act 1974 (NPW Act)*
- *Threatened Species Conservation Act 1995 (TSC Act)*
- *Prevention of Cruelty to Animals Act 1979 (PoCA Act)*
- *Occupational Health and Safety Act 2000 (OHS Act)*
- *Environmental Planning and Assessment Act 1979 (EP&A Act)*
- *NSW Fisheries Management Act 1994 (FM Act)*
- *Marine Parks Act 1997 (MP Act)*
- *Exhibited Animals Protection Act 1986 (EAP Act)*
- *Animal Research Act 1985 (AR Act)*

Relevant NPWS Policy and Information

- NPWS Rehabilitation of Native Animals Policy
- NPWS Infectious Diseases Manual and OH&S Circulars
- NPWS Commercial Film and Photography Policy

REVIEW OF PLAN

This document will be reviewed on a three yearly basis by the NPWS and the DOT and following any incident where a wildlife response was required.

EXTRACT FROM AUSTRALIAN MARITIME SAFETY AUTHORITY WORKING DRAFT NATIONAL OILED WILDLIFE RESPONSE PLAN (1997).

The Effects of Oil and Petroleum Products on Wildlife

The following information on the effects of oil on various wildlife is provided as a guide only to contingency planners and responders. The review is by no means exhaustive but is provided on the basis of current literature, open research reports and opinions in the field. Some advice on the effects of oil on wildlife provided in the literature is contradictory and a balanced approach to the reporting of this differing viewpoint is presented. (ref. 3,4 & 5)

1.1 Oil Composition and Chemistry and the Effects on Wildlife.

To evaluate the consequences of oil spills on wildlife it is important to understand the properties and chemistry of crude oils and petroleum products. Oil, depending upon its form and chemistry, causes a range of physiological and toxic effects.

For example the low molecular weight aliphatics of oil can have anesthetic properties and aromatic components such as benzene are known carcinogens and very toxic to humans and wildlife. Some polynuclear aromatics are also carcinogenic, toxic and are concentrated in the food chain eg. in tissues of water filter feeding shell fish like mussels and oysters.(4)

Volatile components of oil can burn eyes, burn skin, irritate or damage sensitive membranes of nose, eyes and mouth. Hydrocarbons can trigger pneumonia if it enters lungs. Benzene and toluene and other light hydrocarbons of oil and fuels if inhaled are transferred rapidly to the bloodstream from the lungs, can damage red blood cells, suppress immune systems, strain the liver, spleen and kidneys and even interfere with the reproductive system of animals and humans.

In general refined petroleum products tend to be more toxic to organisms but less persistent in the environment. Crude oils and heavy fuel oils like bunker fuels tend to be less toxic but are more persistent and more likely to have physical impacts on wildlife eg coating feather , fur and skin.

This compositional variation of oil also governs its behaviour, weathering and fate after being spilt in the marine environment.

For example;

- volatility of hydrocarbons into the air from the oil,
- solubility of toxic components into seawater from the slick and dispersed oil,
- formation and stability of emulsions,
- rate of natural oil dispersion,
- persistence, adherence to surfaces (“stickyness”) and physical state,
- and rate of natural biodegradation.

The chemistry of crude oils and petroleum refined products vary significantly. Each spilt oil or fuel will behave differently and it is difficult to predict accurately the impacts on wildlife of the spilt oil. For example some oils will become more “sticky” as they weather and have a greater tendency to adhere to surfaces such as a animals skins, fur, hair or feathers. Some liquid oils will form solid waxes very quickly after only a few hours of weathering at sea, others will have little residues and other oils may contain high levels of persistent hydrocarbons.

Ambient wind and water conditions can modify the oils impact on wildlife for example on a warmer sea and high winds evaporation may remove the low molecular weight aromatics in preference to being dissolved into the water column and impacting marine life in the water column or incorporated into the food chain.

1.2 Effects of Oil on Sea Birds

A significant number of oil spills have resulted in the mass mortality of sea birds.

Sea birds are very sensitive to both the internal and external exposure to crude oil and its refined products.

They have a high risk of contacting spilled oil due to the amount of time that they spend on the interface of sea and on foreshores where spilled oil aggregates. Sea birds may also contact spilled oil during their attempts to obtain food, since several species of fish have been found to aggregate beneath floating oil. (6)

Oil coated birds become susceptible to hypothermia, dehydration or drowning, starvation and predation.

Sea birds are affected by oil in several ways (ref. 1-5):-

- contact with crude oil or refined fuel oils causes feathers to collapse, matt together and change physical properties.
- matting of feathers can severely hamper the ability of the bird to fly.
- there is a breakdown in the water proofing and thermal insulation provided by the feathers and oiled birds often suffer from hypothermia.
- oiled feathers may cause the seabirds to lose buoyancy, sink and drown because of increased weight or lack of air trapped in the feathers
- loss of body weight increases quickly as the metabolism increases to counteract low body temperature
- crude oil and oil products can also cause severe irritation of the skin.
- birds often ingest the oil in an attempt to preen themselves.
- cause irritation or ulceration of the eyes, skin, mouth, or nasal cavities
- affect the birds natural responses and ability to find food eg diving, swimming
- they may also ingest oil via their prey if their food chain becomes contaminated.
- the consumption of oil components may poison the birds or cause intoxication.

Internal effects of oil exposure can be sub-lethal or acute and will depend to a large extent on the type of oil, its weathering stage and inherent toxicity.



These internal effects can include:

- the destruction of red blood cells, cells important for the immune response,
- alterations of liver metabolism,
- adrenal tissue damage
- pneumonia,
- intestinal damage
- reproduction of birds exposed to petroleum can be severely altered by exposure of adult birds to oil,
- reduction in the number of eggs laid,
- decreased fertility of eggs,
- decreased shell thickness,
- a disruption of the normal breeding and incubating behaviours (7).

Effects of oil on seabirds will also vary depending upon the species life stage and age, with adults tending to be more resistant than young.

It has been stated that as little as 4 microlitres of petroleum contaminating a fertile egg can cause the embryo to die.(6)

1.3 Effects of Oil on Fish

There are many fish species in Australian waters, from tropical to temperate. Various species have different sizes, physiology, feeding behaviour, can live in the open sea, near shores, coral reefs or in estuaries or mangroves, at the sea surface or on the bottom of the sea. Therefore only generalisations can be made on the impact of oil on fish.



The eggs, larvae and young fish are comparatively sensitive to oil (particularly dispersed oil) as demonstrated in laboratory toxicity tests, but there is no definite evidence from case histories to suggest that oil pollution has significant effects on fish populations in the open sea. This is partly because fish may take avoiding action and partly because oil-induced mortalities of young life stages are often of little significance compared with huge natural losses each year through natural predation and fishing.

Reports also suggest that some fish species do not avoid oil but are actually attracted to oil because they resemble “floating objects”.

Fish have often been seen associated with floating objects on the sea this could be a result of:

- reduced light intensity under the object (slick),
- some floating objects provide food eg. smaller fish and algae,
- providing shade also makes prey less visible to predators,
- providing shelter from diving birds,
- damps wave action so less energy is used swimming,
- provides an orientation point, or point of reference in a optically homogeneous sea.

This causes problems for seabirds attracted by schools of fish under oil slicks.

There are increased risks to some species and life stages of fish (and crustaceans such as prawns) in shallow nearshore waters, like estuaries, coral reef, seagrass and mangrove habitats. These foreshore function as feeding and “nurseries” breeding grounds, for fish and crustaceans.

The main problem is usually tainting of fish, or in some cases loss of sales because clean fish are presumed to be tainted because they come from a spill area. The worst tainting problems may arise with fish, crustaceans, molluscs and algae in aquaculture facilities such as fish cages, and shellfish in intertidal beds. Oil on the water may effect the supply to aquaculture ponds.

It is also common for fishing to be banned for a short time in the region of an oil spill, in order to maintain market confidence and to protect fishing gear.

In respect to fish contamination for oil, the water soluble fraction of the oil or WSF is the most important component. This WSF will vary from oil to oil and may only be a minor proportion of the total weight eg in parts per million. But this is often the most toxic fraction of oils eg benzene, toluenes, xylenes etc.

1.4 Impact of Oil Spills on Marine Mammals

Mammals are a special group of vertebrates, with a combination of characteristics that separate them from all other animals (3,4,5,9,10,11).

Mammals may:

- breathe air through lungs,
- bear live young,
- produce milk for their young,
- are warm-blooded,
- can have smooth skins, hair or fur,
- have relatively large brains,
- and their variety of tooth sizes and shapes or sift food in the sea using baleen
- and are often protected by conservation laws.

Mammals comprise five distinct zoological groups and their life cycles, patterns of habitat use and responses to oil are very different.

Within the large class of animals known as mammals is a small specialised group called marine mammals - these include sea otters, sea lions, seals, walruses, sea cows (dugongs) and whales. They not only suckle their young, as do all mammals, but millions of years ago they adapted to life in the sea.

CETACEANS include all whales, dolphins, and porpoises.

There are two main types:

1. Toothed whales (suborder *odontoceti*) include dolphins, porpoises, sperm whales, orcas or killer whales, and narwhals. These whales have from two to more than 50 teeth, and breathe through a single blowhole.

2. Baleen whales (suborder *mysticeti*) include the blue, gray, humpback, and bowhead whales. Instead of teeth, baleen whales have plates of baleen arranged in a row along the upper jaw, which serve to filter their food. Baleen whales breathe through a pair of blowholes.

SIRENIANS include two species of plant-eating marine mammals that inhabit tropical and subtropical waters. Dugongs (family *Dugongidae*) are found in the Indo-West Pacific including Australia and China. Manatees (family *Trichechidae*) are found in the Caribbean, Florida, the Amazon and West Africa.

PINNIPEDS are the flipper-footed marine mammals. This group includes Sea lions and fur seals (family *Otariidae*). True seals (family *Phocidae*) includes harbour seals and elephant seals and Walruses (family *Odobenidae*).

Marine mammals are vulnerable to oil spills because of their amphibious habits and their dependence on air to breathe. Some marine mammals live and migrate in small groupings whilst others exist in large localised colonies. These feeding and behavioural differences mean that oil spills will have varying impacts and may be very seasonal and range from a few individuals to massive colonies being affected.

The rough skin surface, body hair and grooming habits of some species increases the possibility of oil contact, ingestion and associated toxicological effects.

Contrary to some reports most marine mammals do not necessarily avoid oil slicks or contaminated shorelines. Whales and seals have been observed to swim and feed in the presence of oil, whilst others have been able to detect slicks and move away from harm.

Accurate data on the effects of oil on mammals is limited due to the public concern about unnecessary and inhumane controlled laboratory experiments on mammals. Therefore data from actual spill events appears to provide the only source of physiological effects.

Effects of oil on marine mammals are dependent upon species but may include:

- hypothermia due to conductance changes in skin, resulting in metabolic shock
- toxic effects and secondary organ dysfunction due to ingestion of oil
- congested lungs
- damaged airways
- interstitial emphysema due to inhalation of oil droplets and vapour
- gastrointestinal ulceration and haemorrhaging due to ingestion of oil during grooming and feeding
- eye and skin lesions from continuous exposure to oil
- decreased body mass due to restricted diet
- stress due to oil exposure and behavioural changes.

The nature of the oil and how much it has weathered will also be an important factor in determining the impacts on wildlife.

Individuals oiled early in a spill may be exposed to the more toxic components of the oil by direct contact and ingestion and suffer greater toxicity than those affected by a more weathered oil. The thermoregulatory problems for oiled wildlife would not change.

1.5 Effects of Oil on Cetaceans

1.5.1 Whales

There is little documented reports of cetaceans (whales) being effected by oil spills because of the reclusive and migratory behaviour. Some reports indicate there is a tendency of dead cetaceans to sink in the ocean other reports indicate dead whales would float eg Southern Right. The migratory nature of most whales and the movement away from an impacted area would also cause problems in cause/effect studies on oiled cetaceans.

During the Exxon Valdez oil spill observers reported the deaths of a number of killer whales to oil exposure and their numbers declined after the spill but some researchers argue this was purely coincidental.

Cetaceans have mostly smooth skins with limited areas of pelage (hair covered skin) or rough surfaces such as barnacled skin. Oil tends to adhere to rough surfaces, hair or callouses of animals therefore contact with oil by whales may cause only minor oil adherence.



How a cetacean consumes its food affects the likelihood of its ingestion of oil. Baleen whales that skim the surface and water column are more likely to ingest oil than “gulp feeders” or toothed whales.

One of the major potential sources of oil impact to baleen whales is during the feeding process as oil may stick to the baleen whilst they filter feed near oil slicks. Baleen whales lung and filter huge quantities of water and filter out its feed of plankton and krill. Tarry residues are of particular concern in fouling the whales baleen plates.

Cetaceans like humpbacked whales are pelagic (move freely in the oceans) and may only be transiently affected by oil spills because of their migratory patterns.

It has been stated that pelagic species will avoid oil because of its noxious odours and presence in the water but this has not been proven. The strong attraction to specific areas for breeding or feeding may override any tendency for cetaceans to avoid the noxious presence of oil. Weathered or tarry residues of oil may no longer partition vapours, smells or taints to the water but still present a problem with fouling baleen whales feeding systems or be ingested.

Researchers have also indicated that inhalation of oil droplets, vapours and fumes is a distinct possibility if whales surface in slicks to breathe. Exposure to oil in this way could damage mucous membranes, damage airways or even cause death.

1.5.2 Dolphins

Dolphins are toothed whales which feed on fish and squid and spend much of their time in waters close to shore.

It has been found in some oil spill events that dolphins can detect oil with some cases of avoiding but other times not avoiding and being exposed to floating oil.

As with other smooth skinned, hairless mammals, oil tends not to stick to a dolphins skin but inhalation of oil and oil vapour is a likely impact. The greatest exposure to oil for dolphins would be from surfacing to breathe leading to damage of the airways, lung ailments, mucous membrane damage or even death. A stressed or panicking dolphin would move faster, breath more rapidly and therefore surface more frequently into oil and increase exposure.

Dolphins may also be impacted by the effect of oil on eyes or consuming oil affected food or may starve due to the lack of available food supply or ability to find food.



Chronic ingestion of subtoxic quantities of oil may have subtle effects which would only become apparent through long-term monitoring. The transfer of petroleum hydrocarbons through the mothers milk to a sucking young is another potential route of exposure to young dolphins.

It is also a possibility that secondary bacterial and fungal infections may be caused due to impaired immune systems caused by oil pollution.

1.6 Effects of Oil on Sirenians

Sirenians are “Sea-Cows”, a group of mammals which include Dugongs that are known in tropical waters of Australia. It is believed the largest surviving populations of dugongs reside in the waters of the Great Barrier Reef and Torres Strait. In general they occur in coastal waters from Broom in WA to Moreton Bay in Queensland.



Dugongs are fully herbivorous and feed on sea grass beds in shallow waters. Therefore their habitats are low energy inshore regions of coastline that support seagrasses.

The dugong's head is heavy and blunt, with the mouth on the underside of the head, designed for grazing. They have smooth skins but coarse hairs around their mouth to serve as sensors, searching for edible sea grasses.

Dugong have smooth skin surfaces and are less likely to suffer from skin adherence. Oil tends to stick to the pelage or rough areas of an animals skin. If surfacing in slicks with the head out to breathe it may be possible for dugongs to foul these sensory hairs and also get oil in to its eyes, possibly causing inflammation, infections and affecting its ability to feed and breed.

There is little research on the effects of oil on dugong, but it has been hypothesised that they could suffer from “lipid pneumonia” from the inhalation of oil droplets and oil vapour when they surface through oil slicks to breathe.

Dugongs may also suffer from long term chronic effects such as liver problems if they consume oil droplets or oil affected sea grasses. Depending upon the amount of oil and composition of the ingested oil the effects could range from acute, to subtle, to progressive organ damage.

Aromatics and other low molecular weight hydrocarbons can be absorbed from the intestine and transported via the bloodstream to various target organs within the dugong.

1.7 Effects of Oil on Pinnipeds.

PINNIPEDS are the flipper-footed marine mammals. There are three groups of Pinnipeds:

1. Sea lions and fur seals (family *Otariidae*). They have external ear flaps and can “walk” on all four flippers. Their swimming power comes from their large front flippers.
2. True seals (family *Phocidae*) includes harbour seals and elephant seals. True seals have no external ear flaps and must crawl on land somewhat like inchworms. Their front flippers are small and their swimming power comes from their rear flippers.
3. Walruses (family *Odobenidae*) have no external ear flaps and walk when on land. The upper canines of both the male and female grow into long tusks. Walruses inhabit the Arctic seas and are not found in Australian waters.

The Australian Sea Lion (*Neophoca cinerea*) is the only true Australian endemic pinniped.

Seals & sea lions inhabit rocky shores, are efficient swimmers, preying on fish which they catch underwater, come ashore to rest and breed.

Seals are very vulnerable with respect to oil pollution in that they have to spend much of their time at the surface of the water. They need to surface every few minutes to breathe. They regularly haul out on to beaches. During the course of an oil pollution incident they are at risk both when surfacing and when hauling out.

It has been stated that pinnipeds will avoid oil. This is contrary to observations of seals, sealions and fur seals swimming in the midst of oil slicks during a number of documented oil spills (5) Pinnipeds will stay near established colonies and haul out areas. Oil tends to also collect in natural inlets on foreshores utilised by seals as haul out points.

Fur seals are more vulnerable due to the likelihood of oil adhering to fur. Heavy oil coating and tarry deposits on fur seals may result in the reduction of swimming ability and mobility out of the water.

Most pinnipeds scratch themselves vigorously with their flippers but do not lick or groom themselves so they are less likely to ingest oil from skin surfaces. A pinniped mother may try to clean an oiled pup and ingest oil by grooming or carrying their young.



Some seal pups during oil spills have been seen to be so encased in oil that their flippers have been stuck to their bodies which could lead to drowning or predation. Sand and other detrius may stick to the body tar and oil increasing weight and leading to bouyancy problems.

The risk of oiling increases for pinniped pups as they spend much of their time in shore rocky areas and tidal pools compared to adults who swim in open water.

Recent evidence suggests that pinniped pups are very vulnerable during oil spills because the mother/pup bond is affected by odour. Pinnipeds use olfaction to identify their young. If the mother cannot identify its pup by smell in the large colony it may not feed its young or even reject attempts of the pup to suckle leading to starvation and abandonment.

The likelihood of ingestion of oiled food, the inhalation of oil droplets is also a possibility. Oil, especially light oils, will attack sensitive tissues exposed for example mucous membranes that surround the eyes and line the oral cavity, respiratiry surfaces, anal and urogenital orifices. This could cause corneal abrasions, conjunctivitus and ulcers. Consumption of oil contaminated prey will lead to accumulation of hydrocarbons in tissues and organs.

Pinnipeds with thick layers of blubber and low conductance skin do not suffer from hypothermia like fur-covered animals. But pups of some pinnipeds are furry (wooly fur called lanugo) and may be vulnerable to hypothermia if oiled.

1.8 Effects of Oil on Sea Turtles

Turtles are of particular conservation concern because their numbers are declining (see Appendix ???) Little information is available on the effects of oil on sea turtles but the following effects are likely.

The chances of exposure to oil while they are out at sea is related to the likelihood of the turtles surfacing in an oil slick to breathe and contacting oil, effecting eyes or inhaling into the nasal passages, damaging airways or lungs.



Oil contaminating food supply or skin absorption are other routes of exposure.

Turtles are very vulnerable at beach nesting sites during the breeding season.

Nesting sites are typically on sandy beaches, which, if oiled, can lead to the following problems:

- digestion/absorption of oil via food contamination or direct physical contact leading to damage to the digestive tract and other organs;
- oils can cause irritation of mucous membranes (such as those in the nose, throat and eyes) leading to inflammation and infection;
- eggs may be contaminated, either because there is oil in the sand high up on the beach at the nesting site, or because the adult turtles are oiled as they make their way across the oiled beach to the nesting site. Oiling of eggs may inhibit their development;
- newly hatched turtles, after emerging from the nests, make their way over the beach to the water and may become oiled in the process.



Oiled Wildlife Response Individual Animal Rescue – Release Form



Incident Name:

Rescue Details

Date rescued:	Time rescued:
Species:	ID number:
Location found (map GR and name of area if known):	Habitat type:
Photo taken: Y / N. Photo No:	Oil Sample taken: Y / N. Sample No:
Comments:	
Rescuer:	

Triage Priority

Priority: 1 / 2 / 3	Reason for priority:
Examiner Name:	

Medical Examination and First Aid Treatment

Date examination:	Time examination:
Respiration:	Musculo-skeletal:
Neurological signs:	Skin Condition:
Degree of oiling: None / light / moderate / heavy	Cloacal temperature: Weight: Oral fluids:
Other treatment given:	Examiner Name:

Transport Details

Date transportation:	Pick up time:
Destination:	Distance:
Boxing details:	Other birds in box: Y / N How many?
Comments:	
Time of arrival at destination:	Driver Name:

Cleaning/Drying Details

Cleaning date:	Time:
Detergent used:	Concentration:
Comments	
No. washes:	Water Temperature
Drying Method:	Washer/Drier Name:

Rehabilitation (refer to detailed data on rehabilitation forms)

Release Site:	Release date:	Time:
ABBBS Band No:	Release authorised by:	
Release weight:	Released by:	
Comments (weather conditions, released with other animals etc.):		

Necropsy Details

Date of death:	Date of Necropsy:
Performed by:	
Provisional diagnosis (post mortem form to be attached)	

Note:

1) This form is to accompany animal from the time it is rescued until release or euthanasia. Copies of partially completed forms should be made before transportation of animal cleaning facility and filed at the first aid treatment centre.

2) Rehabilitation observation sheets are to be attached to this original form during the rehabilitation phase. At completion of incident all forms must be sent to NPWS Wildlife Management Officer in Hurstville.

1. AMSA VOLUNTEER REGISTRATION FORM

NATIONAL PLAN TO COMBAT POLLUTION OF THE SEA BY OIL OILED WILDLIFE RESPONSE VOLUNTEER REGISTRATION & AGREEMENT

I wish (*state full name*)
(*First*) (*Middle*) (*Surname*)

To volunteer as a (nominate position)
.....

My postal address is:

My street address is:
.....

My contact telephone numbers are: Day ().....
Mobile.....
Night ().....

In case of an emergency please notify:
Name.....
Phone ().....
Address
.....

Please comment on your qualifications and/or experience in each area of Wildlife Response: (*attached details if space is limited*)

Animal/bird Handling:

Animal/bird Rehabilitation:

Veterinary Care:

Previous Oil Spill Wildlife Response experience and duties:

Other relevant skills/experience (*please tick*):

- | | |
|--|---|
| <input type="checkbox"/> car drivers licence | <input type="checkbox"/> 4 wheel drive experience |
| <input type="checkbox"/> motor boat experience/licence | <input type="checkbox"/> radio comms/marine radio licence |
| <input type="checkbox"/> first aid/CPR | <input type="checkbox"/> carpentry |
| <input type="checkbox"/> computer/ database management | <input type="checkbox"/> plumbing (water/gas) |
| <input type="checkbox"/> water treatment | <input type="checkbox"/> mechanical repairs/construction |
| <input type="checkbox"/> electrical wiring (class) | <input type="checkbox"/> Others (state)..... |

As a member of the National Plan Response Volunteer Program,
I accept responsibility to:

- be available for a minimum of two years;
- abide by directions issued by Volunteer Leader/Coordinator;
- ensure that my tetanus immunity remains current for this period;
- be required to handle oily and distressed birds and other animals;
- be trained in the treatment of oiled wildlife before an incident;
- abide by OH&S requirements: eg. wear protective equipment;
- respond to an incident at short notice;
- during an incident, work a variety of hours and be on call;
- notify Volunteer Leader/Coordinator if unavailable for training or an incident;
- notify Volunteer Leader/Coordinator of change of address, contact details or medical condition;
- accept the Volunteer Coordinators discretion to terminate this agreement at any time.

Safety and the medical condition of personnel and volunteers is of prime importance in the consideration of likely tasks, and duration of duties, to be performed by that individual. To ascertain your suitability please read the following and answer the appropriate questions.

Have you any allergies ? eg (bites, stings, fur, feathers, chemicals, soaps, oil, medications, etc)
(please list).....

Are you taking any medications ? (Yes/No), please state which
.....
.....

Do you have any health problems or physical conditions which should be taken into account in allocating duties ?
(Yes/No) - *if yes please state*
.....
.....

Have you received a tetanus vaccination within the last 10 years ? (yes/ no)

The risk of contracting diseases from animals/birds is increased when your immune system is low.

If you are HIV positive, receiving cancer treatment, pregnant or have allergies to animals it is likely your risk is increased.

The Responsible Officer, as a representative of the National Plan, agrees to:

- place volunteers in positions consistent with their qualifications, skills and interests
- provide training programs to develop basic skills and enhance existing ones
- provide opportunities for volunteers to use their skills effectively
- support and respect volunteer staff
- provide feedback
- ensure volunteers work only within operationally safe environments
- give adequate notice of meetings and workshops

To the best of my knowledge, I have no medical or other issues, other than stated above, that may affect the performance of my work during an Oil Spill.

I agree to abide by all safety regulations, wear appropriate safety equipment provided, and follow directions of supervisors whilst in training and in the performance of duties during spill response.

This agreement will remain valid until:/...../.....

.....
Volunteer signature./...../.....
Date

.....
Nat Plan Responsible Officer./...../.....
Date

If you are considering attending an oiled wildlife response as a volunteer please note the following and complete a volunteer registration form.

Safety

The National Plan to combat Pollution of the Sea by Oil has an overriding policy of: *Human safety first above all other concerns, including wildlife.*

The Incident Management Team and supervisory personnel will seek to eliminate or minimise hazards from the work site.

1.1 Age, Medical Issues & Requirements

- Volunteers must be 16 years or over and in good health.
- Volunteers must be in good health with no substantive medical conditions. If you are pregnant, taking certain types of medication, allergic to animal dander or detergents, or you have a kidney, liver or lung disorder, it is recommended that you consider consulting a doctor before acting as a volunteer.
- A current tetanus vaccination is required.
- If your immune system has been compromised, or if you are taking steroids, or you have recently received anticancer treatment, or you are HIV positive, or you are pregnant, or you have allergies to birds, then you may be at an increased risk of contracting certain diseases from wildlife. In these circumstances, and if reasonable, you should not volunteer for this project.
- Persons with existing medical conditions or taking medication(s) should consider obtaining an opinion from their physician in the matter of whether or not it would be safe for them to be present as a volunteer at an oil spill response site.
- If you are pregnant or you there is a chance that you may be pregnant you should not volunteer for this project.

It is important for you to be aware of the following hazards that you may encounter during an oil spill response:

- Exposure to sun, wind and rain.
- Hypothermia - becoming too cold.
- Hyperthermia - becoming too hot.
- Exhaustion - becoming too tired.
- Injury from birds while handling them.
- Injury while walking on oily or uneven surfaces, such as rocks at beaches
- Possible exposure to noxious chemicals, which can affect the skin by contact, or the body if swallowed or inhaled.
- Tetanus - Please consult your physician to make sure that you have received a tetanus booster within the last ten years.
- Exposure to bacteria, fungi, viruses, parasites, and animal dander, all of which can be transmitted from animals to humans.
- Emotional stress caused by fatigue and potentially observing animal deaths.
- Domestic hazards associated with the food preparation, slippery floors, and detergents.
- Possible injury while operating or being around motor vehicles and/or heavy machinery.

Work Conditions & Obligations:

- Volunteers are expected to comply with all safety regulations and wear appropriate safety equipment and follow the instructions of supervisors and the site safety officer during training, induction and when in the oil spill response site.
- Information on each person's volunteer registration form should be accurate and up to date. This applies to personal information including: emergency contact details, current medications, allergies, and special health considerations.
- Volunteers should take steps to ensure that the supervisor or safety officer is aware of any signs of illness and any injuries (whether while training or while present at the oil spill response site).
- We ask that you be able to complete a minimum number of shifts within a five day period.
- Smoking will not be permitted anywhere in the spill response area.
- It may be necessary to bring several layers of warm clothes, and bring a change of clothes in case.
- Bring rain gear (rain coat, pants, rain hat, rubber boots) - other protective gear will be provided by operations personnel during induction.
- Do not bring children to the site, please arrange your own child care facilities.
- Do not bring pets of any type to the site.
- Do not bring items that may pose a significant sparking hazard; such as cell phones, lighters, matches and cigarettes, camera flashes, pagers, etc.
- Bring sufficient food and water initially for yourself for first few hours after this time food and drink will be provided for you.
- Bring rags or old towels that you may wish to donate (these items will not be returned).

Media Issues

The Wildlife Liaison Officer and Wildlife Media Liaison Officer is responsible for supplying information requested by media.

- Volunteers receiving requests from the media should ensure that the information is provided to the appropriate Response Co-ordinator.
- Photographs may be taken using still cameras provided that the permission of the supervisor responsible for the area has been obtained eg. no camera flash if it is likely to scare wildlife.
- Photographs may not be used for any publication or public presentation without the written permission of the relevant agency manager.

Security of possessions

- You are responsible for the safety of your personal possessions.
We suggest that you do not bring valuable possessions to the spill site.