

The National Swan Sanctuary

Oil Spill Management Plan (Inland And Coastal Waters)

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INTRODUCTION

The Swan Sanctuary has been operating for some 15 years and during that time has had to cope with a wide variety of problems affecting swans principally but also including other birds and wildfowl.

A commonly recurring problem is that of oiling of birds with the contamination usually being due to oils ranging from diesel and gas oil to black heavy fuel oil, but there are also occasions when vegetable oils such as those used for cooking have been the cause of the problem.

This problem of oiling of birds also exists on an international scale where it is usually associated with spillages of crude petroleum and petroleum products, as well as deliberate discharges of oily wastes from ships.

We have strong and friendly relationships with many workers in the field of bird protection in America and in particular with the USA Department of the Interior. From a combination of our own experiences and records of how similar problems have been dealt with in the USA we have written this manual in the hope that the guidance and information will be of assistance to those concerned with the problem of oiled birds.

We wish to acknowledge the assistance given to us by Clayton Environmental Consultants, Tri-state Rescue USA, N.R.A., R.S.P.B, and English Nature in the preparation of this manual and also to the untiring and unstinting efforts of all our voluntary helpers at The Swan Sanctuary and throughout the United Kingdom who have done so much to help our swans and other wildlife.

We hope that you will find this manual useful.

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Preview

This manual is the result of experience gained in treating oiled swans and other birds over a long period of time. The practical experiences at The Swan Sanctuary have been extended by discussions and contacts with other organisations who have faced similar problems and developed solutions. Thus the manual provides a distillation of ideas and experiences into practical action formed from a wide experience on an international basis. The information provided is given particularly with a view to the treatment of oiled swans but is generally applicable to the treatment and rehabilitation of all birds and incorporates advice and basic guidelines for the establishment and operation of facilities for oiled birds.

Although the manual is written particularly from the aspect of handling swans, the procedures generally are equally applicable to wildfowl and other birds. Any specific differences involved in handling different species will tend to arise where there is a veterinary (medical) involvement. The information provided includes practical guidelines on how to arrange the establishment of a treatment facility, how to utilise volunteers and other community resources, health and safety aspects, records and public relations.

The treatment of oiled birds is nevertheless a complex medical and rehabilitation procedure and this manual is not a substitute for veterinary training and practical rehabilitation experience. The Swan Sanctuary will always be ready to provide additional guidance and information.

Specifically where a major oil spill response is necessary because of the effects on wildlife, existing established cleansing and rehabilitation organisations should be used and such incidents should not be dealt with on an ad-hoc basis.

The Swan Sanctuary is available to provide additional advice and guidance and, where there is any doubt about handling oiled birds, the Sanctuary should be contacted.

REHABILITATION OF OIL CONTAMINATED BIRDS

1.0 AN OVERVIEW

Oil has long been known to have a harmful effect on birds through deliberate or undetected long term pollution and contamination from spillages and discharges such as occur on the oceans and inland water ways. Spills arising from accidents are frequently well-publicised occurrences whilst deliberate discharges into the sea and freshwater spills frequently pass unnoticed. What is also frequently not appreciated is that small spillages and leakages such as road run offs, account for a greater volume of oil than the major incidents that are well publicised.

The major incidents, because of the associated publicity, create a demand from the public in general to have an involvement in the resultant clean-up and there is a general desire to be of assistance to the bird population which generally tends to be seabirds and wildfowl. The assistance, however, can be useful for the rare isolated incidents where only a few birds are involved and in fact, given the requisite actions and assistance, there is a better success rate for the cleansing and recovery of birds from the small scale incidents.

Over the years there have been innumerable disastrous efforts to rehabilitate oiled birds. These have included the mute swans, ducks, etc. which were rolled in Fullers earth, left to sit for days and then rubbed with detergent.

Oiled bird cleansing and rehabilitation is difficult and time consuming. It is an urgent but laborious job requiring special attention and procedures, though the initial stages can be carried out relatively simply providing expert guidance is taken. The whole process however is not a simple skill and this manual endeavours to provide the sound basis on which the task can be carried out. The novice at rehabilitation, in addition to absorbing the information provided, is advised to contact a professional organisation such as The Swan Sanctuary to receive advice and not to proceed with an oiled bird in one hand and the manual in the other.

Under the supervision of experienced people, oiled bird cleansing and rehabilitation is successfully carried out, with swans, affected by inland contamination; the failure rate is very low. Other species have been dealt with but with a variable success rate.

The treatment and rehabilitation of oiled birds requires:

1. An understanding of both the external and internal effects of oil on birds.
2. The treatment necessary to combat the external and internal effects of the oils on birds.
3. If necessary, to learn the special techniques required to work under major spill conditions.
4. Investment of time, money and planning necessary to set-up an organisation to deal with a major spill crises. Even if the smaller number of birds involved in an inland waterways spill is to be dealt with, forward planning will result in a more efficient operation and help to guarantee the success of the wildfowl rehabilitation.

2.0 EFFECTS OF OIL ON BIRDS

The external effects of oil are normally the most noticeable and the most immediately debilitating. Oil destroys the waterproofing and insulating properties of plumage. The bird may suffer from chilling; it is often unable to fly or remain afloat in the water.

The bird has difficulty obtaining food or escaping predators. In addition to the decreased foraging ability of the animal, the presence of oil in the environment may result in a temporary loss of available food. It is these external effects of oil on birds which are most often seen by the general public, and on which treatment efforts have been concentrated.

Internal effects of oil, while not as apparent, are equally life-threatening. Direct toxic effects on the gastrointestinal tract, pancreas and liver occur. Ingestion of the oil by birds attempting to clean feathers frequently results in ulceration and haemorrhaging in the gastrointestinal tract with a pronounced loss of digestive and absorptive ability. This same irritation and ulceration is found on the epithelial surfaces of the eyes.

Oil aspiration pneumonia is not uncommon in oiled birds as is severe and fatal kidney damage. Weakened birds can become susceptible to secondary infections, both bacterial and fungal. It is these internal effects of oil which are not taken into account by most people doing oiled bird rehabilitation.

Different oils have different degrees of severity in short term effects with diesel or gas oil being particularly 'virulent', rapidly affecting eyes and other membranes whilst black fuel oil because of the different constituents does not have such a rapid effect. Edible oils although having a severe effect on the plumage are less likely to have internal adverse effects.

3.0 TREATMENT OF OILED BIRDS

Stabilising The Bird

Do not wash straight away - Assess the bird first.

In addition to the complete standard physical examination, each bird should receive a temporary, numbered plastic leg band and individual records should be kept on each animal. Weight and cloacal temperature should be recorded. We look for cloacal temperatures of >100°F before a bird is taken through the stressful washing procedure. Oil is removed from the mouth and the nares with gauze pads. The eyes are flushed with a warmed sterile saline solution or ophthalmic irrigation.

It is useful to determine the type of oil involved in causing the contamination. This may sometimes be self evident for instance where it is due to diesel or gas oil. In other situations, examination of a spot of oil residue by ultra violet light will determine whether it is mineral or vegetable oil.

A number of oiled birds become dehydrated as a result of enteritis caused by the ingested oil. Dehydration is a serious condition and not merely a matter of being thirsty; it also indicates a reduction in circulating blood volume. For a severely dehydrated bird, intravenous fluids are essential. The intestinal tract may be too damaged to take up orally ingested fluids. For the less injured, feeding the bird with a warm electrolyte solution serves to rehydrate the bird while flushing the oil from the gut. An enteric coating agent (Pepto-Bismol) is then administered orally by feeding tube. depending on the size of the swan, duck or goose.

The bird is placed in a warm, quiet place away from people and noises to stabilise. Nutrients are later added to the tubing solution, and tube-feeding is repeated every 4-6 hours until the bird is permitted free access to food and water after cleaning.

The bird should not be washed until it is alert, responsive, and restored to normal fluid balance. Efforts should be made to stabilise the bird and wash it within 8-24 hours. Some components of petroleum products can be absorbed through the skin with possible toxic results to the kidneys and liver. However in some situations, for instance, in the case of a severe diesel or gas oil contamination, it may be necessary to wash immediately, as the risks from this are less than those of continued exposure whilst seeking to achieve stabilisation.

Removing Oil From The Feathers

Oil must be removed from the feathers without damaging the delicate feather structure. Oiled birds should not be washed unless large amounts of hot water are available. One to two hundred gallons of 103°F - 105°F water are needed over a 20 minute period to wash one swan. This type of water can only be assured through a series of hot water heaters. The water must be above 102°F in order to lift the oil. Anyone who has tried to wash a greasy frying pan in cold water will understand this necessity.

Numerous cleaning agents have been tested for their ability to remove oil from feathers. Very few of them meet the criteria. Fairy dish washing detergent has performed best in every test; use it. No experimentation should be done during an oil spill response. The cleaning procedure should be done in a warm, quiet area, free from drafts.

We strongly advise that containers of ten gallons or larger, up to bath size, be used for the cleaning process depending on the size of the bird. Three tubs are filled with water hotter than 105°F (the added detergent will cool the water temperature). You may require a detergent concentration of anywhere from 1% to 15%. The soapy water is gently and repeatedly poured over the bird, with the workers gently stroking the feathers in the direction of the feather growth. Never scrub or scrape at the feathers.

The bird should be removed from the cleaning container when the water gets dirty. The entire washing process is then repeated in the next container. An oiled bird may require three or more washings.

NB: It is important to note that, any detergent/water/oil waste from the washing procedures are not disposed of ad lib into the mains drainage system or the environment. Where it is foreseen that large scale/frequent cleansing of oiled birds is likely, the cleaning unit should have some form of 'interceptor' installed as an integral part of the drainage layout servicing the 'washroom' area. Alternatively, it is possible to construct a 'sump' arrangement into which waste wash waters can be emptied and retained for later collection/disposal by an approved carrier. The local water authority pollution control officer should be able to advise further.

Removing Detergent From The Feathers

The feathers must be completely rinsed if the bird is to be rehabilitated. Any detergent residue can impede water-proofing. Rinsing is carried out with a combination of spray rinses and containers of clean water at 103°F - 105°F. The bird is not acceptably rinsed until diamond-like beads of water roll freely from the feathers. This is the one sign of a successfully cleaned oiled bird, and once you see it, you will recognise it as the end point in every oiled cleaning effort. Failure to rinse the bird adequately is probably the most common cause of unsuccessful rehabilitation efforts.

The newly-washed bird is placed in a clean holding pen to dry. The pen should be lined with sheets or towels, curtained to minimise human intrusion, and a section of the pen provided with heat lamps or overhead heaters to allow the bird to find a comfortable ambient temperature. We find that birds don't respond well to forced hot air from dryers and prefer the ambient warm air of heat lamps, immediately beginning to preen their feathers back into alignment.

For diving birds which are totally unable to walk on dry land (e.g. Grebes) we need to provide specially designed foam pillows to prevent breast abrasions and open sores.

3.1 Restoring Water-Proofing

Free access to water and a variety of foods can now be provided. The birds are checked to see which ones are self-feeding. The droppings are monitored for blood and oil, and the affected birds are treated for enteritis with more tubed easily absorbed nutrients.

After 24 hours, the birds are allowed to swim. They need free access to a pond with large amounts of water, ideally 2,000 gallons, so that they can actually swim and preen. The larger birds such as swans require ponds that are at least a meter in depth. Water birds usually take to the water readily; when they begin to get wet, they leave the water to preen. It is this process of swimming, then preening which realigns the feathers and restores the feather structure necessary for release.

The alignment of the feathers is what ensures the bird's water-proofing; the feather structure does not require, but is further enhanced by, the application of oil from the bird's own uropygial gland; this "preen gland wax" seems to assist in maintaining the feather structure, much as hair spray might hold a hairstyle.

Birds which are waterproof will demonstrate the diamond beading of water on their feathers. They will also be able to remain in the water, depending on species, anywhere from 10 to 15 minutes without getting wet.

A bird which is waterproof should slowly be exposed to temperatures comparable to outside weather. This, of course, is critical in cold winter months.

A rehabilitated oiled bird should be of average weight for its species and sex. It should be adequately muscled so that it can forage normally in the wild. The bird should not show signs of disease. Birds should be released early in the day in proper habitat and the Department of Environment kept informed.

4.0 MAJOR OIL SPILL CRISES

The intensive human labour, the immediacy of the effort, and the need for special equipment (water, detergent, pools, etc.) can make oiled bird rehabilitation seem an impossible task. A spill involving fifty, one hundred or more birds taxes resources of even those of us who like to think we are always prepared for oil spills. Organisation and pre-planning are the key factors to a major oiled bird rehabilitation effort.

4.1 Contingency Planning With Other Agencies

It is very beneficial to have already established an open and clear working relationship with the other agencies which will be responding to the spill, for example, on the River Thames, The Swan Sanctuary, E.W.R.A., N.R.A., and Local Authorities.

4.2 Determining Protocol

We have been rehabilitating oiled birds for 15 years; we successfully treated many species ranging from mallards through to swans and geese.

After the type of oil and the species of birds affected are known, a treatment protocol should be established and firmly adhered to at the treatment centre.

Oiled bird rehabilitation is a medical response, and needs to be treated as such. Only individuals with hands-on experience in major oil spill responses and training in human safety concerns should be permitted to rehabilitate severely oiled wild birds after a major oil spill.

4.3 Training A Workforce

The Swan Sanctuary maintains a team of volunteers-lay persons and professionals – who have been trained in advance of an oil spill and are assigned very specific jobs during a spill. Registrants for the training sessions must demonstrate a real willingness to be available during an oil spill.

There are four specific tasks groups in our oil responses: 1) Operations Control; 2) Medical/Rehabilitative Care; 3) Cleaning Supplies, and 4) Set-up. Each volunteer is trained in at least two areas. All volunteers are instructed regarding human safety and health concerns.

5.0 CONCLUSION

Over the last 15 years at The Swan Sanctuary, we have spent many thousands of pounds and hours treating the effects of oil on birds. We have studied the published papers and informal accounts of other rehabilitation efforts, and we have conducted carefully planned research on oiled birds.

We find that many oiled birds can be rehabilitated successfully using the techniques covered briefly in this paper, although certain modifications must be made for each species.

The secret to successful oiled bird rehabilitation is a commitment to invest the time, money, and manpower necessary to establish a response - in advance of any oil spills. Rehabilitation staff must follow documented procedures to the letter, avoiding short-cuts and last minute alterations in protocol. As with many procedures, experience is the greatest tool for carrying out the job quickly and efficiently.

We also recognise that rehabilitating a single oiled bird is a simple procedure compared to responding to a major oil spill crisis, when oiled birds may come in great numbers, media and public pressure is great, and governmental agencies and industry are trying to cope with dozens of on scene problems ranging from explosion to fire hazards.

In any geographical area prone to oil spills, a structure must be established which:

- 1) encourages inter-organisational communication and support;
- 2) dedicates itself to pre-planning, and
- 3) insures that the many steps needed to minimise the effects of an oil spill are all carried out quickly and efficiently.

CLEANING OILED BIRDS

A small local unit can be established for caring for oiled birds but this still requires some forward planning before accepting any birds for treatment. Such local units should establish contacts with organisations such as The Swan Sanctuary so that there is appropriate technical back-up available. Facilities to deal with major oil spill incidents need to be much larger with a more formal organisation and a large capital investment. Guidelines for such facilities are given separately in the manual, and this section deals with the small facility.

1.0 ORGANISATION

Prior to accepting any oiled birds the method for handling the birds should be worked out including appropriate pens for stabilisation of the birds, washing facilities and aftercare facilities. Not all of these may be immediately available, for instance the aftercare facility could be by arrangement with a large organisation such as The Swan Sanctuary. Contact should be made with an experienced organisation and instruction received in how to physically handle oiled birds, and the recovery care to stabilise the bird before carrying out the de-oiling process. Instruction in how to carry out the de-oiling should be obtained. The necessary equipment and materials should be established so that these are also readily available when required. Where occasional use only is envisaged storage of treatment solutions is not recommended.

Volunteers who will help with the process should be identified and these people should receive the appropriate training. More people than is envisaged will be required at any one time should be recruited and addresses and phone numbers regularly updated as it is certain that when a bird requires treatment not everybody will be available.

2.0 SPECIAL CONSIDERATIONS

Water hardness may have an effect on the cleaning agents performance. However, extremely soft water reduces the water ability to rinse the detergents from the feathers.

3.0 THE EFFECTS OF CLEANING AGENTS ON OILED BIRDS

A cleaning agent is judged for its ability to remove oil from feathers without damaging feather structure or irritating skin and mucosal surfaces. Additionally, the cleaning agent must be non-toxic and easily removed from feathers without leaving a residue. Studies and experience have shown that FAIRY washing liquid effectively meets these criteria. We do not recommend that experimentation with other cleaning agents is tried. Suggestions for alternative cleaning should be forwarded to an organisation such as The Swan Sanctuary who have facilities for evaluation. Experimentation should never be carried out during an oil spill crisis.

4.0 SAFETY OF WORKERS AND BIRDS

Bird and human safety must be emphasised at all times. Birds should not undergo the stressful cleaning process until they are alert and stable and have been examined and released by the medical staff. Washing should be done quickly and quietly to minimise stress to the animal. If the bird becomes unduly stressed (struggling, open-mouthed breathing), rinse it quickly and place it in a quiet warm place to rest. Workers should wear protective gloves, aprons and protective goggles. Special caution should be taken to prevent water contact with any electrical cords and outlets. Traction floor mats should be placed in the cleaning area to prevent workers from slipping in wet areas. It is also recommended that workers should have appropriate inoculations and specifically Tetanus inoculations should be up-to-date.

CLEANING PROCEDURES

Swans are normally washed by a team of two people, one of whom restrains the bird and one carrying out the washing procedure though on occasions more people may be necessary particularly an 'assistant' to carry out trouble shooting and providing supplies. However, the fewer people in close proximity to the bird the less the stress and the greater the chance of a successful recovery.

Bird and human safety is to be emphasised at all times. Birds cannot be washed until stabilised and released by the medical team. Washing should be done quickly and quietly to minimise stress to the animal.

1.0 BATH PREPARATION - Approximately 20 - 30 Minutes

- Assemble all supplies and prepare baths in advance so that the actual cleaning time does not exceed 30 minutes.
- Use a suitable container that is not too large but which will hold the bird and enable access for cleansing and allow for adequate rinsing.
- Water temperatures should be 104°F. The temperature of the water is critical or the oil will not be lifted from the feathers. Temperatures should be checked and regulated by a person acting as a "floater" ahead of the washing team. When preparing baths, do not fill immediately, as space must be left for adjustments to water temperature and addition of detergent.
- Fill three baths with detergent in varying percentages of 1 - 15 % solutions of washing up liquid. Percentages vary according to the type of oil and degree of contamination of each individual bird.

2.0 WASHING - Approximately 15 - 30 Minutes

- The TEAM is assembled.
- The bird is held in water in a body-hold and the head is held in a front or rear chin position to gently restrain head and neck.
- Clean eyes, head and neck areas. The nostrils are wiped and the eyes are flushed with clear, warm water or sterile eye flush. The head can be very gently cleaned with a soft toothbrush.
- Ladle water over the back of the head, neck, each wing and back, while gently stroking the bird in the direction of the feather growth. Agitating the water under the bird, especially the water around the underbelly, helps lift the oil.
- The bird is moved from bath to bath as quickly as possible, gently squeezing the excess water and oil from the rump area before proceeding to the next bath.
- After the cleaning team is finished with a bath, the "floater" empties the bath and rinses it out with cold water, being sure to keep soapy items and buckets separate from rinse buckets and hoses.
- This procedure is repeated in as many baths as are necessary, as determined by the supervisor in charge.

3.0 RINSING - Approximately 15 Minutes

- The number of baths required for a deep rinse may vary.

- Baths are to be filled with clean, hot water at 104°F. The bird is placed in the bath and clean water is ladled over it.
- After rinses, the bird is then taken to the sink for spray rinsing (a shower massage nozzle works very well) starting at the back of the head and working down the neck, back, each wing, body and then the underparts in this order so as not to force the detergent back up into already rinsed areas. Repeat, if necessary.
- It is often advantageous to rinse two birds together in a modified playpen. After a quick but thorough rinse with a shower massage, the birds are allowed to stand freely in a playpen covered with a wide-mesh screen. The birds are not restrained while they are sprayed thoroughly with warm water. These unrestrained birds will often preen and lift their wings during free rinsing. Check carefully under the tail and wings to determine the bird is thoroughly rinsed.
- In both rinsing methods proceed slowly and thoroughly until you see diamond-like droplets of water rolling freely off the feathers. This "beading" and an appearance of dry feathers, means oil and detergent residue is being successfully removed from the feathers. If beading is not apparent, not all the detergent is removed and the bird will not attain water-repellent plumage.

4.0 DRYING

- The bird is wrapped in a clean dry towel and moved from the sink area to a drying table. The bird is blotted and gently squeezed dry. Eyes are flushed once more.
- The clean bird is then taken immediately to the rehabilitation area and placed under an appropriate heat source.

5.0 CLEAN-UP

- All team members help in clean-up except for the supervisor who has taken the bird to rehabilitation and must complete all written records.
- Supplies must be replaced as needed for the same or next washing team.
- Check with the supervisor as to how soon the next bird will be cleaned.

REHABILITATION & RELEASE

The removal of oil from the plumage of the bird and stabilisation of condition is the first step along the route to eventual release to the birds' natural habitat.

During the ensuing period nutritional, housing, and pre-release needs of the bird will require continuous attention and observation to be successful, and to reduce the time the bird is at the treatment unit. Where a local station has carried out the de-oiling it may be sensible to arrange for the bird to go to an established rehabilitation centre such as The Swan Sanctuary where full recovery facilities are available.

Whatever method is chosen, the practicalities such as supplies of diet foods, volunteers for bird maintenance, pens, pads, and transport should all be established before accepting birds for treatment.

1.0 NUTRITION

The nutritional, housing and pre-release needs of wild birds vary considerably by species. It is the responsibility of the organiser to determine which birds are likely to be handled and plan for the likely varying needs.

Oiled birds can experience difficulty in effectively utilising nutrients due to a number of factors. Reduced function of the gastrointestinal tract can be caused by damage to the absorptive lining of the intestines, disruption of normal digestive enzymes and bacteria, dehydration, and the presence of oil or fresh or clotted blood in the intestinal tract.

Severely debilitated birds can be given fluids intravenously or fed an isotonic balanced nutrient solution by stomach tube. However, these diets do not always supply an adequate daily caloric intake.

Birds that are active and alert and do not demonstrate signs of sickness (diarrhoea, blood in the droppings, green urates) can be provided with containers of appropriate food, from floating duck pellets and cereal, pellet gruels for dabbling ducks to thawed frozen fish augmented with vitamin B 1 or white bait for diving birds. Adequate quantities of food and water must be available ad-lib to cleaned birds. The food should be checked frequently and more food provided whenever necessary. The food should be replaced with fresh food 2-4 times daily. Records should be kept on every pen to ascertain whether or not the birds are feeding. Droppings should be checked for faecal (brown or black) and urate (white) production.

Presentation of the food is important. Wild animals are not accustomed to seeing food presented on a plate or in a small bowl. Often creative thinking is required to stimulate the animals to eat. Place gruels or fish in large, flat, see-through glass dishes. The bird must have a container large enough to get its beak in the dish; dabbling ducks, geese and swans place their bills in the water horizontally and sift through the water to pick out small bits of food. Pouring water into a bowl and throwing a few grains of wheat, small pieces of bread or duck pellets so as to make a splash as it falls, will often prompt a feeding response.

Provide Daily Care Sheets at each pen for recording all feeding and care. Clean up all spilled food daily; do not allow food to mould or dry out.

2.0 HOUSING

Perhaps one of the biggest challenges during a major oil spill is providing the proper housing for a large number of birds.

Construct pens according to the needs of the species affected. Provide padding as necessary, depending on species. Position heat lamps for maximum effectiveness and SAFETY of birds and handlers. Mount heat lamps securely and at a safe distance from all flammable material; always provide an unheated area to which birds can retreat.

Birds in large pens should have boxed-off or curtained areas in which to hide. Birds which are overcrowded may exhibit aggressive behaviour towards one another.

Diving ducks live their entire lives in or near the water and are anatomically and physiologically unsuited for life on land. During initial rehabilitation these birds must be housed in pens with special foam or net substrates. These birds must be given access to swimming immediately after the cleaning/drying procedure. Diving birds should be kept on constantly cycling water in pools of a size and depth adequate for their species; often this means very large pools a meter or more deep. Each pool must have a cushioned platform area on which birds can rest. The birds must be kept in well ventilated areas with soft water and returned to the wild as soon as possible. Special cases or easily stressed birds may need to be placed in a more restricted area. This area will be off limits to all personnel except those specifically appointed. Birds in the non-stress area are not to be disturbed in any way.

3.0 RESTORING WATER-PROOFING THROUGH SWIMMING

The washing procedure often disrupts the delicate feather structure, thus reducing each feather's ability to repel water and keep the bird dry (and afloat in water). When the cleaned bird is given access to swimming water, it may discover that it is not completely waterproof. It immediately begins to preen each feather back into proper alignment. It is this reconditioning of the feathers that restores the water-repellent characteristic of the plumage.

4.0 GENERAL GUIDELINES

- Work as quietly and efficiently as possible to minimise stressing the birds. Avoid sudden motion and do not stare directly at the animals. Move slowly and carefully.
- When holding a bird, keep it at or below waist level. Do not grip the bird too tightly or restrict expansion of the chest.
- Diet instructions should be posted. Workers should always use clean catheters when tube-feeding each bird; they should record the amount and type of solution fed.
- Communication with supervisors is important so that birds are not handled unnecessarily. This is particularly important when birds are being transported between areas if re-washing or medical reevaluation is necessary.
- Birds such as herons and cormorants with dangerous bills, and geese and swans which are very strong and large may require special handling techniques. Supervisors should provide handling instructions for dangerous or unusual species.

No volunteer should handle a bird if he/she does not feel comfortable doing so. Workers and bird safety should be emphasised, and gloves and safety glasses used when necessary.

5.0 DAILY PEN CARE

- Make first observation before Centre gets busy. Record.
- Prepare fresh food for each pen. Replace as needed throughout the day.
- Replace floor papers or sheets in each pen as needed throughout the day.
- Check water in each pool. If necessary, drain and clean pool thoroughly. This may be required many times each day.
- Provide swimming opportunities for all birds. Observe for shivering, water beading, etc. and record. Return to dry pens after swim.
- Be sensitive to any changes in the behaviour of each bird. Look for shivering (ripples in the water), colour and consistency of droppings, tremors/convulsions, head drooping, listing, panting, open wings, activity/inactivity. Notify the vet of anything out of the ordinary. Serious conditions should be brought to the attention of the vet. Record observations on appropriate forms. Also, record activities that will help determine release - readiness: self-feeding, swimming, etc.
- Maintain a high standard of cleanliness and order throughout the rehabilitation area.

6.0 RELEASE

- 1) Arrangements for release should be carefully planned in advance. This is especially true if large numbers of birds are involved. The following concerns should be addressed:

Date and alternative date(s)

Appropriate site and alternatives

Arrangements for access to site

Transportation

Arrangements for supplemental feedings if needed

D.o.E. and English Nature, N.R.A.

Sufficient numbers of appropriate containers

Manpower for quick capture, examination and for transport

- 2) Provide detailed instructions for release crew.
- 3) Prior to release, the birds should be allowed to acclimatise in an outside compound.
- 4) Each bird will be well examined and have an identification tag attached.
- 5) Birds must be released in an appropriate and oil free habitat by mid-day. Transportation should be in an enclosed vehicle with ventilation.
- 6) Birds should be observed after release for fitness, activity level and general health.

ESTABLISHMENT OF AN OILED BIRDS FACILITY FOR OIL SPILL RESPONSE

1.0 PRE-SPILL ORGANISATION

- To design and prepare and keep up-dated a Facility Operations manual. This document should contain current protocols (methods of work), D.o.E. licences, colleague and volunteer names and telephone numbers, master forms for duplication, and supplies information.
- Arrange workshops to train staff and volunteers in the basics of oil spill response and specific responsibilities. To maintain a current master list of trained volunteers. To design and update the training manual, as necessary and appropriate.
- To identify and acquire necessary non-perishable supplies for Operations Control in clearly marked containers.

2.0 DURING A SPILL RESPONSE

2.1 Human Resources

Training scheduling and supervision of staff and volunteers is vital to ensure the continuity of the response and to ensure the effectiveness of the response.

2.2 Worker Training

- 1) Organise training sessions for new volunteers. Volunteers must be able to commit a specified number of shifts per week during an oil spill response. Training should be conducted annually.
- 2) Training should include:
 - an overview of the internal and external effects of oil on birds,
 - basic steps to responding to a major oil spill,
 - specific responsibilities of each team (Operations Control, Medical, Cleaning, Rehabilitation, supplied and set-up),
 - a clear understanding of the human safety and health issues involved with oiled birds
- 3) Release of Liability - all volunteers should be over the age of 18 and should be required to sign a general Release of Liability form.

2.3 Worker Scheduling

During the initial response, two people are assigned to schedule volunteers and staff to operate the treatment centre.

- Schedule workers based on the estimated needs per team, per shift each day. Efforts should be made to set-up schedules at least four days in advance from the start of the response. Recommended shift times are 7.30am - 1.30pm; 1.30pm - 7.00pm; and 6.00pm to midnight. Supervision of overnight should be with minimal number of skilled supervisors. Workers should be prepared to arrive early and stay late so that briefings and de-briefings are possible.
- Prepare and post daily a schedule of volunteers and staff responsibilities and include the names and responsibilities of the supervisors on duty.
- Maintain a current card file of volunteers. Keep all volunteer records, including registration forms, release forms, and hours of attendance.

2.4 Worker Supervision

Upon arrival at the centre, workers will be directed to the appropriate team and will be supervised by that team head. However, Operations Control staff is responsible for the following:

- Ascertain that all workers sign in and out. Make certain that appropriate waivers have been signed and that tetanus shots are current.
- Direct volunteers to appropriate work areas. Establish clear areas of responsibility and chain-of-command through posted signs and distribution of colour code badges.
- Co-ordinate meals and snacks for workers. Keep the volunteer rest area clean and well stocked.
- Arrange breaks for tired workers and send stressed volunteers home

3.0 FACILITIES MANAGEMENT

3.1 Human Interaction

- Control access to the facility admitting only authorised workers. Facilitate the flow of birds and people.
- Organise daily staff meetings to determine daily goals and priorities, and ensure that all volunteers are aware of the conclusions.
- Regulate the noise level at the Centre.
- Complete the end-of-day reports as needed.
- Facilitate all requests between wildlife care teams and supplies, and set-up to ensure that all necessary supplies are acquired.
- Ensure that receipts and petty cash slips are obtained for all operating expenses and purchases, and maintain a file of expenditure and receipts.

3.2 Physical Facility

- Clearly identify all the work and storage areas within the unit.
- Oversee the placement of birds so that oiled birds are housed in separate rooms from animals and from birds which have been partially or completely cleaned.
- Implement safety protocols for procedures and equipment.
- Check for hazardous substances to ensure compliance with fire and safety regulations. Tangled or frayed electrical cords, hot motors, wet floors and aggressive animals represent potential hazards.
- Arrange for the proper disposal of all waste materials from the cleaning process and excess supplies (1990 Environment Act - Duty of Waste Care)

3.3 Records

1) Supervise the management of records to ensure that all information is recorded and preserved. This includes:

Telephone Log	-	record all calls and responses
Bird Sightings	-	record on paper and maps all reports of oiled birds and the response
Running Records	-	list all birds received by species, case number and location of retrieval
Daily Care Sheet	-	document the care for each bird
End-Of-Day Report	-	report current days work and list the next days jobs.

2) Admit birds, obtain retrieval information and record on each bird's master data form. Assign a numbered leg tag to each bird (low on left leg) and record the number on the running record sheet.

4.0 SUPPLIES AND SET-UP

This work can be undertaken by a separate team or specialised section of the Operations Control Team.

- Obtain and maintain necessary equipment including additional telephone lines, steam generators, water softeners, drums and skips for waste disposal, play-pens, heat lamps, etc.
- Obtain and organise consumable supplies such as detergent, medical supplies, appropriate foodstuff's, newspapers, paper towels, etc. Co-ordinate supplies with medical cleaning and rehabilitation personnel.
- Oversee construction of additional special pen pools and work areas within the facility as appropriate.

5.0 PUBLIC RELATIONS

- 1) Greet all visitors at the reception area. Admit only trained workers.
- 2) Post, by reception area and/or telephone, as appropriate, current editions of the following documents:
 - a) daily press release
 - b) letter to the public
 - c) how to retrieve and transport oiled birds
 - d) information on volunteer training sessions
 - e) donation 'wish list'
 - f) directions to the cleaning facility or pick-up stations
- 3) Media Relations - greet representatives from the news media in the reception area; require that everyone sign in with their name, organisation and telephone number. Generate and distribute daily press releases. Post times for two daily media interview sessions (suggested times are 11.00am and 1.00pm). (Direct media visits and calls to the official spokesperson for the day).
- 4) General public - give visitors a copy of the 'letter to the public' which explains rehabilitation procedures and informs them of scheduled training workshops. Do not permit access to bird holding areas.
- 5) Accept and record donations of supplies or money from volunteers or the general public, maintain a card file of all contributions, including name, address, telephone number, donation and any other pertinent information.
- 6) Answer all incoming calls and maintain a telephone log. Take information of bird sightings and record location on paper and on an area map, and record response; contact retrieval teams with information. Encourage volunteers in the facility to limit personal calls including incoming calls.
- 7) After the oil spill response, produce a report summarising the efforts to retrieve and rehabilitate affected birds. Thank all who donated time services and equipment. Send the report to workers, donors and news media. Send personal letters of thanks to all volunteers and donors.

6.0 OPERATIONAL MANUAL

6.1 Manual Design

The Operational Manual contains basic information needed to manage a response facility. The manual should be updated at regular intervals and kept at the front desk during an oil spill response.

The following minimum information should be included:

- 1) Regional Oil Spill Response Plan with chain of command notification and set-up of oil spill response
- 2) Names, addresses and telephone numbers for
 - Committee members and trained volunteers
 - Ministry organisations, Environment Agency, Natural England, Canal and River Trust
 - E.W.R.A., R.S.P.C.A., R.S.P.B., and other wildlife organisations
 - Area contacts with Police, Fire and Local Authorities
 - Local and specialist veterinarians
 - Press contacts at local and national level
 - Sources for supplies and equipment, steam generators, sump pumps, water softeners, water sources, waste water disposal, medical supplies, detergent, power generators, emergency lighting, and transport. Out of hours contact information should be included. Oil absorbent materials
- 3) Sources of foodstuffs, both bird and human
- 4) Current protocols for medical, cleaning, and rehabilitation techniques
- 5) Policy statement on handling products of a hazardous nature
- 6) Regional bird species, list by season
- 7) Copies of all forms listed under Master Forms
- 8) Set-up and inventory information

MEDICAL TEAM

1.0 TEAM RESPONSIBILITIES

The medical team is responsible for the evaluation of and the medical care of all oiled birds delivered to the Sanctuary. This includes determining diagnostic tests, treatment protocols, research projects and post-mortem examinations.

2.0 DURING A SPILL RESPONSE

- 1) Examine oiled birds arriving at the Sanctuary and initiate treatment.
- 2) Identify birds having injuries or diseases that create increased risk
- 3) Provide medical treatment for and daily reevaluation and care of all 'at risk' birds
- 4) Maintain medical records; all medical findings and treatment should be noted
- 5) Assist with daily care of birds that may need medical or nutritional support
- 6) Evaluate and clean birds as requested by other volunteers and staff.
- 7) Clean reusable equipment and the treatment area
- 8) Take responsibility for the proper disposal of all consumables including sharps (needles, scalpel blades, etc.). (Environment Act 1990 - Duty / Care of Waste)
- 9) Maintain an ongoing inventory of medical supplies
- 10) Supervise the safety of all humans and birds involved in medical treatment procedures
- 11) Communicate with other team members any changes in protocols

3.0 GENERAL GUIDELINES FOR MEDICAL CARE

- 1) **MINIMISE STRESS** by handling the birds as little as possible. Prepare treatments ahead of time. Keep noise to a minimum, and respect the privacy needs of wildlife patients by providing visual barriers or 'hides' so that they do not constantly have to see humans or birds which may stress them.
- 2) **PROVIDE APPROPRIATE TEMPERATURE CONTROL AND VENTILATION.** This is especially important for oiled birds which typically have difficulty regulating their body temperatures and are susceptible to secondary disease problems that can be caused by poor ventilation.
- 3) **BIRDS SHOULD BE STABILISED AND WASHED WITHIN 8 - 24 HOURS.** Birds that cannot be washed within that time should be re-evaluated.
- 4) **EVALUATE ALL CASES AND CONSIDER HUMANE DESTRUCTION OF HIGH RISK BIRDS.** Unnecessary suffering can be alleviated and limited resources dedicated to those birds which have a better real chance of survival.

- 5) **PREVENT HEALTH RISKS TO HUMANS AND TO OTHER BIRDS.** Wear protective gloves, gowns and masks when handling oiled birds. Isolate birds with signs of infectious disease. Understand the physical dangers associated with the handling of different species.

Secure treatment for injured humans; clean all cuts thoroughly with an antiseptic and request medical attention for major wounds. Set an impeccable example for your assistances and make sure that they are adequately protected at all times.

- 6) **KEEP COMPLETE AND ACCURATE RECORDS** to ensure that each bird receives appropriate medical care.

MEDICAL PROTOCOLS

These protocols are based on more than fifteen years of research and field experience and incorporate the experience and research of The Swan Sanctuary. They are designed to stabilise birds prior to washing, to treat any existing or acquired health problems, and to minimise the stress involved in their handling and care. Stress has been well documented as a mortality factor in captive wildlife; this is particularly true when birds are already compromised by oil exposure. The medical procedures are designed to alleviate the physical effects of oil contamination while providing fluids for rehydration and reducing the on-going absorption of toxic substances.

While the protocols are similar for all birds, specific handling techniques and the extent and duration of treatment often varies according to the species and also with the type of oil involved, as well as the presence or absence of complicating factors. Hardy species such as dabbling ducks and Canada Geese can usually be cleaned, treated and released within 3-4 days, with a success rate that may exceed ninety percent. Swans, diving ducks, cormorants, and grebes are more difficult to treat; complications such as plumage damage and secondary infections are not uncommon. Ocean-going birds should be released as soon as possible after waterproofing is restored; protective use of anti-fungal medication should be considered if extended rehabilitation or antibiotic therapy is necessary due to the 'abnormal' environment of the facility.

Intensive fluid therapy is necessary when kidney damage is present. Intravenous catheters can be used to avoid repeated venepuncture and handling stress to the bird. Placement of catheters requires medical training and the use of sterile techniques.

Winter spills present additional problems due to cold temperatures and more limited food availability. Because birds must be acclimatised to the weather, and in excellent nutritional balance and feather condition before release, extended supportive care may be necessary.

Accurate and thorough records are necessary to ensure that each bird receives proper treatment. Records also generate data which can be used to improve medical and cleaning techniques used in the treatment of oil contaminated birds.

1.0 OVERVIEW OF PROTOCOLS

Medical personnel admit arriving birds and record relevant information provided by the personnel carrying out the retrieval. This information is transferred to sequentially numbered, individual permanent records. Corresponding plastic bands are then placed on the left leg of each bird.

A two-part medical protocol has been developed to facilitate prompt evaluation and stabilisation of all birds. Initial treatment (Medical 1) should occur within two hours of capture and can be performed in the field if trained personnel are available. More extensive treatment for those birds which are suffering seizures, debilitated or extremely depressed is presented in the section labelled 'Medical 2'.

MEDICAL 1: Initial Evaluation And Treatment

- 1) A quick but thorough physical examination including weight is performed. General body condition, extent and distribution of oiling, and signs of oil toxicosis are noted. Birds with traumatic injuries and/or signs of disease should be evaluated in greater detail. Blood samples for additional studies can be taken at this time.
- 2) Warmed physiological saline (0.9%) or other sterile fluid should be used under light pressure to flush oil from the eyes. The mouth and nares (nostrils) are gently cleaned to remove oil. The vent area is examined and droppings or foreign materials removed. Excess oil is removed by wiping around the head

with a cotton wool ball and from the body with an absorbent cloth. Feathers should be wiped in the direction of growth.

- 3) It is undesirable to allow a bird to ingest oil by preening. However, there are almost no acceptable ways to prevent preening. The mouth should never be taped shut as this interferes with cooling mechanisms, obstructs regurgitation, and can actually suffocate those species which do not have external nares. Wrapping the bird in sheeting or pillowcases can only be recommended if care is taken to provide holes for the legs and cloacal; even then such wrapping may cause the bird too much stress.
- 4) IF THE BIRD IS ALERT AND RESPONSIVE, flush the gastrointestinal tract by stomach tubing clear fluids. Two ml of Pepto-Bismol can then be administered as a protective lining for the GI tract. Place the bird in a quiet, warm area to await farther treatment or cleaning. To prevent regurgitation, do not handle for a minimum of twenty to thirty minutes.
- 5) IF THE BIRD IS SUFFERING A SEIZURE, EXTREMELY WEAK OR DEPRESSED AND CANNOT MAINTAIN PROPER HEAD CARRIAGE, do not administer anything by feeding tube. Instead place the bird in a warm quiet area. Such birds will need special care as soon as possible.
- 6) Every effort should be made to clean stabilised birds within 8-12 hours of admission.

MEDICAL 2: Treatment Of Critical Birds

- 1) Extensive parenteral fluid therapy (subcutaneous or intravenous) is necessary for the treatment of critically affected birds:
 - a) Seizuring birds
 - b) Birds which cannot maintain head carriage
 - c) Extremely depressed and debilitated birds
 - d) Birds with clinical signs of shock
 - e) Birds with clinical signs of kidney failure
 - f) Hypothermic birds
 - g) Birds with toxic exposures
- 2) Intravenous fluids are indicated for birds with signs of shock. These birds should also receive single injections of Dexamethasone. Subcutaneous fluids may be substituted in other cases if intravenous fluids cannot be given. Adjunct oral fluids can be given if the bird can maintain erect head carriage.
- 3) Intravenous fluids can be administered in the medical metatarsal (leg) vein.
- 4) Fluids are usually warmed to body temperature (38.3°C - 38.9°C) prior to administration. Room temperature fluids should be used if the bird is seizing and/or hypothermic.
- 5) Each bird should be placed in a covered box in a warm area (temperature at between 25°C and 30°C for birds from temperate climates). If the building is not sufficiently heated, large plastic or glass bottles filled with hot water (40°C - 45°C) can be placed under the wings next to the body. If the bird has been seizing and/or is hypothermic, do not provide hot water bottles but rather place the bird in a well ventilated, comfortable area.
- 6) Re-evaluate these birds hourly. Isolate any birds with signs of infectious disease. Consider euthanasia for any bird which shows no improvement in 12 - 24 hours, and presents a potential risk

to other birds. If improvement is seen with attitude and activity returning towards normal, prepare the bird for washing as described.

ADMISSION CHECKLIST

This outline should be completed and posted in the medical treatment area during a spill response.

Entry Examination And Treatment

- 1) Place identification band on bird
- 2) Record weight and cloaca! temperature
- 3) Remove excess oil from head area
- 4) Check vent for obstruction
- 5) Complete physical examination. Note the extent of any oiling. Provide appropriate first aid. Identify birds that require additional treatment.
- 6) Remove excess oil from legs, wings and body
- 7) Swab mouth and nostrils
- 8) Flush eyes with sterile wash
- 9) In some cases, parenteral fluid therapy is indicated.
- 10) Coat digestive tract with Pepto-bismol / Milk Magnesium
- 11) Record all data
- 12) Place in appropriate housing to await further treatment or evaluation

OILED WILDLIFE RESCUE AND DELIVERY

If the caller has found an oiled bird, the following instructions should be given:

- 1) Look carefully to see if there are any other oiled animals around, or if there is an obvious source of the oil.
- 2) Do not attempt to chase and catch the bird. Oiled animals can die from fear and from rough handling. We will organise trained personnel to rescue the oiled birds.
- 3) Please provide us with the following information:
 - a) Number and species of oiled birds
 - b) Date and time the birds were seen
 - c) Specific location(s) of birds and directions on how to get there
 - d) How were the birds behaving? (Are they feeding? Can they fly? What is the extent of the oiling?)
 - e) Type of oil and appearance, e.g. crude or otherwise, liquid oil, tarry lumps, etc.
- 4) We will arrange the rescue of the birds as soon as possible which depending on the size and extent of the emergency may take some time but we will attend just as soon as possible.
- 5) If the caller is capable of rescuing a smaller species of bird, instruct the caller:

Approach the bird slowly and gently drop a suitably large towel or jacket over its head and body. Do not grab the bird by its neck, wings or legs. Grasp the bird firmly through the cloth and securely fold the wings to the body. Make certain that its head is not near your face. Tuck the body beneath one arm and support the feet. Remember that the bird can harm you and itself by struggling to escape; hold it gently but firmly, keeping the head covered. Avoid contact with the oil.
- 6) Please call a supervisor for specific handling techniques if the birds involved appears to be an aggressive species, for example, cormorants and herons.
- 7) Place the bird in a well ventilated, solid sided container such as a strong cardboard box. **DO NOT USE A WIRE CAGE.** Immediately transport the bird to the nearest cleaning or pick-up point, give details of the location.
- 8) **DO NOT ATTEMPT TO FEED OR CLEAN THE BIRD.** The birds must receive medical attention before they can be washed. Cleaning the birds is a delicate and difficult job which requires special training and equipment.

MATERIALS & SUPPLIES FOR EMERGENCY OILED BIRD TREATMENT UNIT

1.0 OPERATIONS CONTROL

- 1) First aid kit for humans
- 2) Large signs, including "Quiet", "Cleaned Birds", "Oiled Birds", "Medical Treatment", "Clean Linens", "Newspaper", "Dirty Laundry", "Volunteer Area", "No Admittance", etc.
- 3) Writing paper, poster boards
- 4) Waterproof markers, pens, rulers, scissors
- 5) Tapes - adhesive, paper, duct
- 6) Plywood, to build dry pens and pools; 4 x 8's, bracing beams hardware
- 7) Staple gun and staples
- 8) Tool kit
- 9) Heavy duty electrical extension cords
- 10) Brooms, mops, cleaning agents (use with caution in wildlife areas)
- 11) Rolls of polythene (a minimum of two 8 x 100 foot rolls of 4 - 8 mil) used by set-up and rehabilitation teams to line puddle pens, protect floors, and serve as room dividers
- 12) Meals and snacks for volunteers: e.g. Juices, fruit. Mars Bars, coffee, tea, Bovril, sugar, milk, disposable cups, etc.

2.0 MEDICAL

- 1) Plastic, numbered leg bands of varied sizes
- 2) Penlights to examine pupillary response, oral cavity
- 3) Cotton wool balls, Q-tips, gauze squares, cloth squares
- 4) Alcohol swabs for cleaning skin at injection site
- 5) Sterile eye flush in squirt bottles or syringes
- 6) Scales and boxes or bags for weighing birds
- 7) Tube feeding materials
- 8) A large volume of electrolyte solutions; minimum of 150ml per mallard sized bird should be on hand. Limited shelf life
- 9) Several bottles of the enteric coating agent Pepto-Bismol
- 10) Sterile electrolyte solutions (+/dextrose)
- 11) Sterile syringes, needles and pediatric-sized catheters for injectable fluids and medications; these must be re-sterilised if used more than once. Assorted sizes are needed
- 12) Medications:
 - a) non-steroidal ophthalmic antibiotic solution
 - b) non-steroidal ophthalmic antibiotic ointment (for use on skin injuries only)
 - c) broad spectrum systemic antibiotic having a wide safety margin
 - d) Dexamethasone
- 13) Antiseptic solutions such as Povidone, iodine or chlorhexidine for cleansing wounds and Milton for cleaning equipment
- 14) Bandaging materials for lacerations, immobilisation of limbs, etc. Sterile gauze pads, Kling gauze, and masking tape are a minimum. Vet wrap and Elasticon tape are also helpful.
- 15) Sterile instruments for debriding and cleaning wounds
- 16) Protective gloves, masks and clothing

3.0 CLEANING

1. Floating thermometers
2. Massage shower head and fixtures
3. Protective aprons, goggles and gloves

4. Washing up liquid. Allow P/2 litres per 40 gallon bath (depending on size of bird and degree of contamination).
5. Hot water source-fast recovery hot water heaters (more than one will be needed in a major spill) or steam generators (can be hired from industrial supply firms)
6. Towels, cloths, etc.
7. Anti-skid floor mats for human safety
8. Strong tables, 72" long

4.0 REHABILITATION

- 1) Protective clothing
- 2) Soft-sided baby play pens
- 3) Sheets and towels
- 4) Plastic bins
- 5) Black plastic sacks
- 6) Feeding and water dishes, including cat litter trays, cake and pie tins, large dog dishes, large mixing bowls, buckets, measuring cups, and spoons
- 7) Blender and can-opener
- 8) Newspaper; NO magazines
- 9) Feeding tubes
- 10) Assorted syringes (10ml - 50ml) for oral use for providing food and nourishment. Although these can be washed and re-used (allow 30 for every dozen birds), these dry out and stick if stored too long.
- 11) Liquid solutions for tube feeding debilitated birds
- 12) 6-12 heat lamps, red, with wire basket holders
- 13) Brooms, cleaning materials
- 14) Bird foods: soluble electrolyte and vitamin preparations, dog food, soya-based infant formula, cracked corn, duck pellets, frozen fish, wheat, bread, depending on species affected.
- 15) Kiddies pools, fibreglass pools

STATEMENT OF POLICY

DEALING WITH PRODUCTS OF KNOWN OR UNKNOWN HAZARDOUS NATURE

Petroleum products are generally composed of many hundreds or even thousands of chemical compounds. Even in the best circumstances, these materials are toxic to animal life.

Direct contact with hazardous agents should be minimised and that repeated contact should be avoided at all costs.

We at The Swan Sanctuary feel that it is important to protect our staff and volunteers from these hazards. While we do not advocate panic in dealing with oiled birds, we do feel precautions should be taken to safeguard our workers from contact with oil, as we would when working with any material with unknown toxicity. We therefore warn our volunteers about the long-term hazards of oiled bird rehabilitation and require that they wear gloves and protective clothing to minimise contact with these products.

We would further recommend that people rescuing oiled birds in the wild and those cleaning oiled shorelines take similar precautions.

CLEANING AGENTS FOR OILED WILDLIFE

The Swan Sanctuary is a non-profit organisation staffed by professionals and volunteers, and dedicated to the rehabilitation of injured wild birds.

These efforts include the cleaning and medical care necessary for rehabilitation of wild birds contaminated in oil spills and, as part of this effort. The Swan Sanctuary works to assure that the organisation uses the most effective treatment techniques which will not endanger the affected animals.

Consistent with this policy, we do conduct research into the effectiveness of cleaning agents and techniques at removing oil from feathers. However, being a non-profit organisation with limited resources, we must limit our studies to readily available agents which we have reason to believe, based on preliminary scientific studies, hold promise for safety and effectively cleaning oiled wildlife.

Furthermore, as our first priority in the event of an oil spill is, and always has been, and always will be, the health and safety of the affected animals and our workers, we devote all our capabilities during an oil spill to this rehabilitation effort and do not conduct research during these emergencies. We are always willing, however, to consider research into new and effective treatments at other times.

To evaluate a new product for treating oiled waterfowl, we generally require a five gallon sample of material, the appropriate information and persuasive preliminary data which suggest this treatment might be significantly more effective and less toxic in our rehabilitation efforts than the procedures we currently use.

RAPID RESPONSE

Oiled birds may become disabled and susceptible to capture immediately following an oil spill or may grow progressively weaker over a period of days before they can be rescued.

The more quickly a bird can be rescued and treated following oil contamination, the better its chance for survival.

There is a golden period when oiled birds become weak enough to capture but not too debilitated for successful treatment. It is vital to direct all rescue efforts to this period; it is better to have 30 people in the field for the first four days following a spill than to have 4 people in the field for thirty days.

SAFETY

A primary consideration in the rescue of wildlife is the safety of human beings.

Teams rescuing oiled water birds can be exposed to dangerous rivers, estuaries and coast lines, hazardous footing on slippery banks, and bitter cold weather. Proper clothing and safety equipment should be stock-piled in advance of a spill.

Birds should be handled with towels or gloves; no birds should be carried by bare hands.

Aggressive and sharp-billed birds should be held at or below waist level. Protective goggles should be available for all retrieval personnel.

Certain oils can present serious health hazards for human beings. Rescue personnel should use caution with regard to inhaling fumes or getting oil in their eyes or on their skin.

Oil and water do not mix, please help us to keep them apart.

Follow the Oil Care Code

At home

- when you drain your engine oil - don't oil the drain!
- take used oil to an oil bank, so that it can be recycled.
- telephone 0800 663366 free of charge to find the location of your nearest oil recycling bank.
- don't mix used oil with other substances, such as paint or solvents, as this makes recycling very difficult.
- if you have oiled fired heating, regularly check your tank and pipes for leaks. If you notice a sharp increase in the amount of oil you are using, you may have a leaking pipe.

At work

- site your storage tank within an oil tight bund wall on an impervious base. Make sure that valves and pipes are contained within the bund.
- make sure that the bund has no drain which would allow oil to escape.
- don't overfill your tank, check the amount of oil already in the tank before receiving a delivery.
- supervise all deliveries, stop delivery if there are any leaks or overflows.
- clearly mark all pipework to show the type of oil and where it leads, and lock all valves and gauges securely after a delivery.

If an oil spill occurs

- try to stop the oil from entering any drains or watercourses using earth or sandbags to absorb it. Never hose it down.
- call the Environment Agency Hotline free at any time on 0800 807060
or
The Swan Sanctuary on 01932 240790.

Key List of Contacts

The Swan Sanctuary
Felix Lane
Shepperton
Middlesex Telephone: 01932 240790
TW17 8NN Email: info@theswansanctuary.org.uk

European Wildlife Rehabilitation Association (E.W.R.A.)
c/o Wildlife Hospital Trust
Aston Road
Haddenham
Aylesbury Telephone: 01844 292292
HP17 8AF Email: mail@tiggywinkles.org

Environment Agency
National Customer Contact Centre
PO Box 544
Rotherham Emergency: 0800 807060
S60 1BY Email: enquiries@environment-agency.gov.uk

Natural England
County Hall
Spetchley Road
Worcester Telephone: 0300 060 3900
WR5 2NP Email: enquiries@naturalengland.org.uk

Scottish Natural Heritage
Great Glen House
Leachkin Road
Inverness Telephone: 01463 725000
IV3 8NW Email: enquiries@snh.gov.uk

Natural Resources Wales
Customer Care Centre
Ty Cambria
29 Newport Road
Cardiff Telephone: 0300 065 3000
CF24 0TP Email: enquiries@naturalresourceswales.gov.uk

Department for Environment Food and Rural Affairs
Nobel House
Smith Square
London Telephone: 03459 335577
SW1P 3JR Email: defra-helpline@defra.gsi.gov.uk

MMO Marine Pollution
Lancaster House
Hampshire Court
Newcastle Upon Tyne
NE4 7YH Telephone: 0300 2002024 during office hours
07770 977 825 outside of office hours

Royal Society for the Protection of Birds (R.S.P.B.)
The Lodge
Sandy
Bedfordshire Telephone: 01767 693690
SG19 2DL

Royal Society for the Prevention of Cruelty to Animals (R.S.P.C.A.)
Wildlife Department
Wilberforce Way
Southwater
Horsham
West Sussex Telephone: 0300 123 4999
RH13 9RS

Scottish S.P.C.A.
Kingseat Road
Halbeath
Dunfermline Telephone: 03000 999 999
Fife KY11 8RY