

The Mobile Facility Workgroup Oiled Wildlife Response Concept

Executive Summary: There are four oiled-wildlife trailers currently located within the region. The Workgroup is proposing that these trailers be remodeled and used to form the core elements of three Mobile Rehabilitation Units (MRUs) and one Search and Recovery Unit (SRU) in order to begin addressing the oiled wildlife planning requirements set forth in WAC 173-182. Each MRU will have an estimated capacity of up to 35 oiled birds and when the three units are co-located they will cumulatively have a total capacity of approximately 100 oiled birds. This capacity will be adequate to meet Level 4 (1-15 recovered birds) and Level 3 (16-100 recovered birds) responses as described in the Wildlife Response Annex of the Northwest Area Contingency Plan and would be developed by December of 2008. Level 2 (101-500 recovered birds) and Level 1 (500+ recovered birds) responses would be developed over the next three years.

In early 2006, representatives of the petroleum industry organized a meeting and demonstration session for other industry stakeholders and state and federal trustees, to discuss the potential benefits of developing mobile rehabilitation facilities. After that initial meeting, a Mobile Facility Workgroup was established to further develop the mobile facility concept.

The Workgroup encourages other stakeholders to review and comment on this mobile facility concept, and invites them to participate in the Workgroup as the project moves forward. At present, no formal commitments are in place and the specific details of the project are still under development.

The Workgroup currently includes representatives from:

Petroleum Industry	Clean Rivers Cooperative, Inc.
Washington State Department of Fish and Wildlife (WDFW)	Focus Wildlife
United States Fish and Wildlife Service (USFWS)	Islands Oil Spill Association (IOSA)
Oregon Department of Environmental Quality (ODEQ)	International Bird Rescue Research Center (IBRRC)
NRC Environmental Services (NRCES)	Progressive Animal Welfare Society (PAWS)

The Mobile Facility Workgroup has focused on the following principles:

- 1) To maximize the usefulness of the mobile oiled wildlife resources already in the region;
- 2) To establish meaningful levels of recovery and rehabilitation capacity for oiled wildlife; and,
- 3) Provide a means toward satisfying the oiled wildlife requirements in the RRT NWACP.

This document introduces a conceptual plan to develop mobile oiled-wildlife facilities, by modifying existing state and private resources, to support small to moderate-sized oiled bird recovery and rehabilitation efforts. This plan represents the first step toward satisfying the new wildlife contingency planning requirements adopted by the Washington Department of Ecology

in late 2006 (Chapter 173-182 WAC). It also would begin to meet the oiled wildlife response needs described in the Northwest Regional Wildlife Response Plan Annex of the Northwest Area Contingency Plan. The next step in this process, which is not being addressed in this document, would involve the incorporation of these mobile facilities into a larger infrastructure capable of responding to Level 2 and Level 1 spill responses. The Workgroup has a goal of satisfying all of the DOE and RRT planning requirements within three years

Oiled wildlife rehabilitation requires large amounts of specialized resources including space, water, and personnel. Without significant planning and preparation, it is unlikely that sufficient quantities of these resources will be available during a spill in time for an effective oiled-wildlife response. This proposal is focused on the development of an adequate infrastructure to deal with oiled bird recovery and rehabilitation and is intended to begin the development of a system for providing these resources during spill responses in the Northwest. A program to develop an adequate number of trained and qualified personnel to work within this infrastructure will be necessary to conduct an effective oiled-wildlife response.

Additional Background

In late 2006, the Washington Department of Ecology (DOE) modified the existing oil spill contingency plan rules and adopted new planning requirements for oiled wildlife (WAC 173-182-540). In a separate process, the Region 10 Regional Response Team (RRT) adopted a Northwest Regional Wildlife Response Plan Annex to the Northwest Area Contingency Plan. The RRT plan defines the general needs of four different levels of oiled bird response, based on the number of birds that have been recovered. These response levels, defined as Levels “4”, “3”, “2”, and “1” involve 1-15, 16-100, 101-500, and 500+ oiled birds respectively. *It should be noted that the actual number of birds that are recovered and rehabilitated during a response typically represents only a small percentage of the total number of birds that are impacted during a spill event. A response in which one hundred birds are recovered may actually represent a spill event in which many more hundreds of birds are oiled. In the RRT Wildlife Response Plan and this document all references to numbers of oiled birds are to recovered animals. The distinction between the number of birds recovered and the numbers of birds impacted during a spill is very important in planning the quantities of resources needed.*

While the Mobile Facility Workgroup believes that a trailer-based mobile facility approach will be effective on Level 3 and 4 responses they recognize that logistical issues begin to reduce the practicality of this approach as the number of recovered birds increases above 100 birds. For this reason, the Workgroup will continue to explore strategies for oiled wildlife response for Level 1 & 2 spills.

Proposed Mobile Rehabilitation Units

There are four oiled-wildlife trailers currently located within the Pacific Northwest region. Three of these trailers (owned by NRC Environmental Services, WDFW, and the Clean Rivers Cooperative, Inc.) are converted semi-trailers ranging from 45 to 53 feet in length. A fourth trailer, also owned by NRC Environmental Services, is a converted 35' shipping container mounted on a semi-trailer chassis. The newest of these trailers was built in 1997.

When the existing oiled-wildlife trailers were evaluated relative to the new facility requirements, it became apparent that a lack of adequate holding space significantly limits the number of birds these units can support. If additional holding space was added, however, the estimated capacity of these units more than doubles without having to do extensive alteration to the trailers themselves. The Workgroup is proposing that three of the converted semi-trailers be remodeled and upgraded for use as the core elements of three Mobile Rehabilitation Units (MRUs). Each of the MRUs will conform with Washington State and Federal regulations and guidelines for oiled wildlife facilities and would consist of one of the existing oiled-wildlife trailers, additional ventilated holding space, and the necessary supporting equipment (see Figure 1). The Workgroup is also proposing to use the 35' shipping container/trailer (owned by NRC Environmental Services) in conjunction with a specially developed box truck (owned by the Clean Rivers Cooperative) to form a Search and Recovery Unit for use throughout the region.

While the capacity of each MRU is dependant upon a number of assumptions (see Appendix B), the estimated capacity of each MRU is up to 35 recovered oiled birds, with a total capacity for the three co-located MRUs of approximately 100 recovered oiled birds. This will support the oiled bird recovery and rehabilitation efforts for Level 4 (1-15 recovered birds) and Level 3 (16-100 recovered birds) responses as described in the RRT Wildlife Response Plan.

Once completed, these MRUs would continue to be stored and deployed as determined by their owners. The Workgroup anticipates that mutual aid agreements will be established in order to coordinate the mobilization of these units.

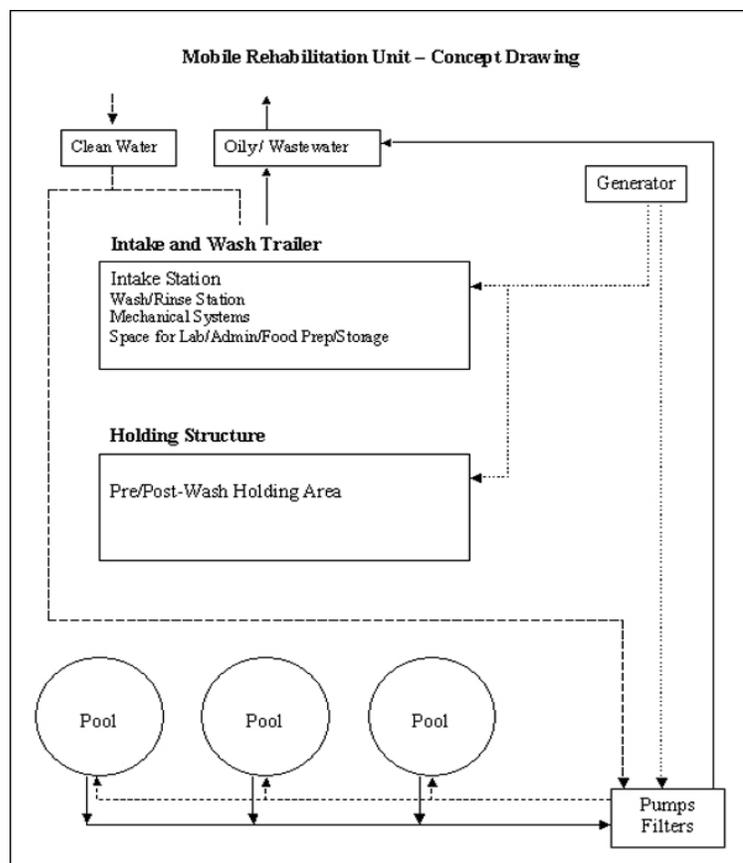


Figure 1. The major components utilized in forming each individual Mobile Rehabilitation Unit.

Each Mobile Rehabilitation Unit would consist of the following:

- **Intake and Wash Trailer**

This would be one of the three existing oiled-wildlife trailers. The existing trailers each have approximately 350 square feet of floor space and, once remodeled, would contain one intake station and one wash station, with the remaining space to be used for mechanical systems, laboratory, food preparation, storage, admin, etc.

- **Holding Structure**

Pre-wash and Post-wash holding areas will require approximately 300 square feet of heated and ventilated space for a facility of this size and would be housed in a separate structure from the intake and wash trailer. This space could be provided through the use of another semi-trailer or other type of structure (tent, portable office building, etc.) provided that it is transportable and that its purpose as a holding area can be achieved.

- **Recovery Pools**

Three, 12-foot diameter pools with associated pumps, filters, and netting.

- **Electrical Generator**

A stand-alone generator is needed for sufficient electrical power.

- **Water Handling**

Given the large water volumes necessary for rehabilitation efforts, it is not possible for the MRUs to carry their own water. Each MRU will therefore require external systems capable of providing adequate quantities of freshwater and of handling equivalent quantities of wastewater.

Mobile Search and Collection Unit

The Workgroup is also proposing that one mobile Search and Recovery Unit be constructed. This unit would include equipment and supplies to outfit and support at least five search and collection teams of 3 persons each. This unit consists of two main elements:

- 1) A personnel support structure, similar to the converted container trailer currently owned by NRC Environmental Services, that serves as a command post and equipment storage for field team coordination; and
- 2) A transport vehicle for moving recovered animals to the rehabilitation facility, similar to the one currently owned by Clean Rivers Cooperative, Inc. The transport vehicle will have the same HVAC needs as the facility holding areas.

Smaller equipment (radios, GPS units, nets, pet carriers, and other items used for search and collection) would be included in the search and collection unit while larger items (ATV's, boats, etc.) would be acquired as needed at the time of a spill.

Conclusion

The Workgroup believes that using the MRU approach described in this document has the highest likelihood of:

- 1) Maximizing the use of currently existing resources;
- 2) Providing reasonable oiled bird recovery and rehabilitation capacity for the northwest region by December of 2008; and
- 3) Satisfying the RRT Level 3 and 4 planning requirements for oiled bird recovery and rehabilitation.

The Workgroup also believes that this approach will provide a solid foundation to work toward satisfying the needs of Level 2 and Level 1 responses per the NWACP over the next three years.

APPENDIX A.

Proposed Mobile Facility Timeline

2007

July-August	Evaluate existing equipment - Completed
September/October	Develop the Mobile Rehabilitation Unit and Recovery Unit concept discussions and solicit comments from stakeholders.
October	Develop a recommendation list for each trailer unit (rehabilitation and search/collection) and identify the associated cost for each.
November	Evaluate funding options for initial and Operations and Maintenance costs.
December	Work with owners to schedule modifications/additions to trailers.

2008

January	Begin modifications/additions to trailers.
December	Complete three Mobile Rehabilitation Units and one Search and Recovery Unit. MOU/Mutual Aide agreements also completed. Operation and Maintenance fund established. Completed plans for achieving Level 1 and 2 wildlife responses.

2009

December	Complete development of Level 2 response capability.
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2010

December	Complete development of Level 1 response capability.
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APPENDIX B.

Rehabilitation Planning Assumptions

The movement of birds through the rehabilitation process begins with search and collection teams working along shorelines where impacted birds are collecting. Supported by the Search and Recovery Unit, these teams will capture oiled birds, stabilize them if necessary, and transport them to a Mobile Rehabilitation Unit (MRU).

Upon arrival at the MRU, a bird enters the system through the Intake Station where it is tagged, stabilized if necessary, has blood drawn, and has evidentiary samples collected. It is then placed in the Pre-Wash Holding Area, where it is warmed and fed until such time that it is medically stable enough to withstand the washing process. Once stable, the bird moves through the Wash/Rinse Station and into the Post-Wash Holding Area where it remains until completely dry. Once dry, the bird is moved to a pool, where it remains until healthy enough to be released (see Figure 2 below).

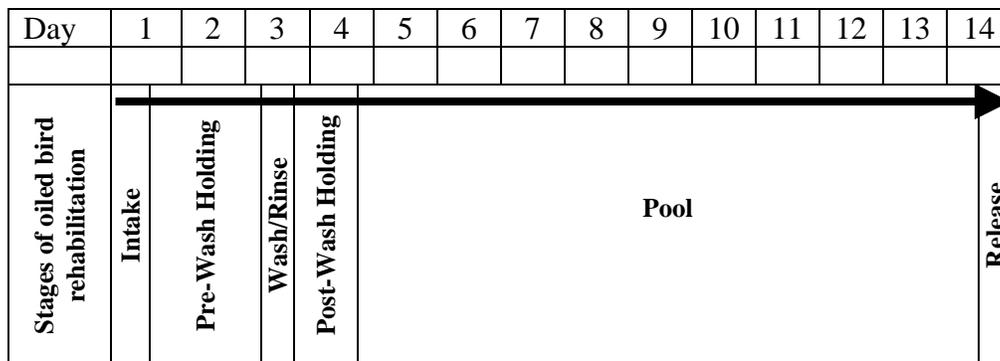


Figure 2. The movement of a bird through a rehabilitation facility over the course of a rehabilitation effort using project assumptions.

A review of previous search and collection efforts has shown that the number of birds that are captured each day will tend to increase over the first few days and then drop off over the next several days. This will result in varying levels of effort, equipment, and personnel being required in the various aspects of rehabilitation over the course of an oiled bird response.

For the purpose of planning for spills, the capacity of a facility can be measured in two different ways (each with different limiting factors); The first measure reflects the number of birds that can be managed in the facility assuming they all arrive at once, and the second measure reflects the total number of birds that can be managed in the facility over the length of a rehabilitation effort. The limiting factors for the first measure of capacity will be the space available for pre-wash and post-wash holding as well as the number of wash/rinse stations. The limiting factor for the second measure of capacity will ultimately be pool space. Note: For spills with more than 50 oiled birds in a single facility at a time there are additional Washington State Rehabilitation Rules apply that require dedicated space for areas such as a morgue, an intensive care unit, as well as separate HVAC systems to prevent disease transmission.

In order to plan for an oiled bird response it is necessary to make assumptions relative to the type of bird, the degree and type of oiling, and the rate at which the birds move through the rehabilitation process. The project assumptions are based on Washington’s past spill history, Washington State rehabilitation rules, and a review of previous rehabilitation efforts. The following assumptions will be used to develop the mobile facility concept:

- A “standard” bird weighs ~1 kg and has rehabilitation needs similar to that of a common murre (the most commonly impacted species in Washington State during past spills);
- Birds are oiled to a moderate depth across their entire body with heavy oil;
- Facility resources will be available when a bird is ready for them;
- A bird progresses through rehabilitation at the following rates;
 - Time in Intake - 1 hour
 - Time in Pre-Wash - 48 hours
 - Time in Wash - 1 hour
 - Time in Drying - 24 hours
 - Time in Pools - 10 days
- All of the birds arrive at the facility in a condition that is suitable for rehabilitation;
- No birds die in care;
- All facility elements comply with federal and state rules;
- Birds arrive at the facility at an increasing then decreasing rate over several days, with a maximum daily rate of approximately 30% of the total number of birds rehabilitated over the course of the response.
- Sufficient numbers of trained and qualified staff are available for recovery and rehabilitation tasks.

Figure 3 depicts the effects of the project assumptions on a hypothetical spill response involving fifty recovered birds. We can see that by Day 5 there will be birds in all stages of rehabilitation and that the total number of birds in a facility (“Total Birds In-House”) will increase until the birds begin to be released at Day 14. The figure also illustrates how the bulk of the birds will shift from pre-wash holding early in the effort to the pools later on.

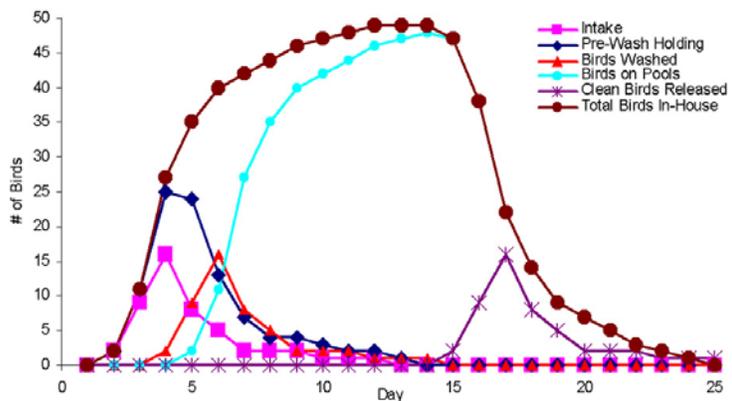


Figure 3. Expected number of birds in each phase of rehabilitation, over time, when using project assumptions and a 50 bird spill scenario.