

**FINAL
RESTORATION PLAN
and
ENVIRONMENTAL ASSESSMENT
for the
AUGUST 24, 1998
TESORO HAWAII OIL SPILL
(OAHU AND KAUAI, HAWAII)**

Prepared by:
**The Natural Resource Trustees
for the Tesoro Oil Spill, Hawaii**

U.S. Department of Commerce
National Oceanic and Atmospheric Administration

U.S. Department of the Interior
U.S. Fish and Wildlife Service

State of Hawaii
*Department of Health
Department of Land and Natural Resources*

NOVEMBER 2000

FACT SHEET

**Final Restoration Plan and Environmental Assessment
for the August 24, 1998 Tesoro Hawaii Oil Spill
(Oahu and Kauai, Hawaii)**

Lead Agency for RP/EA: National Oceanic and Atmospheric Administration

Cooperating Agencies: U.S. Fish and Wildlife Service (U.S. Department of the Interior)
Hawaii Department of Health
Hawaii Department of Land and Natural Resources

Abstract: This Final Restoration Plan and Environmental Assessment (Final RP/EA) has been prepared by the State and Federal Natural Resource Trustees to address restoration of natural resources and resource services injured in the August 24, 1998 Tesoro Hawaii Oil Spill (Oahu and Kauai, Hawaii).

Contact Person: Gail Siani
NOAA, Office of General Counsel
Natural Resources Northwest
7600 Sand Point Way, N.E.
Seattle, WA 98115-0070
206-526-4566
206-527-1542 (fax)

Recommended Citation: *Tesoro Oil Spill Natural Resource Trustees. 2000. Final Restoration Plan and Environmental Assessment for the August 24, 1998 Tesoro Hawaii Oil Spill (Oahu and Kauai, Hawaii). Prepared by: National Oceanic and Atmospheric Administration, U.S. Department of the Interior, and State of Hawaii. 90 pp.*

November 2000

TABLE OF CONTENTS

1.0	INTRODUCTION: PURPOSE OF AND NEED FOR RESTORATION	1
1.1	INTRODUCTION	1
1.2	NATURAL RESOURCE TRUSTEES AND AUTHORITIES	2
1.3	OVERVIEW OF OIL POLLUTION ACT OF 1990 REQUIREMENTS	3
1.4	COORDINATION WITH THE RESPONSIBLE PARTY	4
1.5	PUBLIC PARTICIPATION	5
1.6	ADMINISTRATIVE RECORD	6
1.7	SUMMARY OF THE NATURAL RESOURCE DAMAGE CLAIM	7
2.0	AFFECTED ENVIRONMENT	8
2.1	PHYSICAL AND BIOLOGICAL ENVIRONMENT	8
2.2	ENDANGERED AND THREATENED SPECIES	10
2.3	HISTORIC AND CULTURAL RESOURCES	11
2.4	PROTECTED AREAS	12
2.5	HUMAN USE SERVICES	14
3.0	INJURY DETERMINATION AND QUANTIFICATION	16
3.1	SUMMARY OF PREASSESSMENT ACTIVITIES	16
3.2	ASSESSMENT APPROACH	16
3.3	PATHWAY OF OIL	18
3.4	POTENTIALLY AFFECTED NATURAL RESOURCES AND RESOURCE SERVICES	19
3.4.1	Intertidal and Subtidal Biota	19
3.4.2	Threatened and Endangered Marine Species	21
3.4.3	Seabirds	23
3.4.4	Human Use Services	32
4.0	RESTORATION PLANNING	34
4.1	RESTORATION STRATEGY	34
4.2	EVALUATION CRITERIA	35
4.3	ENVIRONMENTAL CONSEQUENCES (INDIRECT, DIRECT, CUMULATIVE)	36
4.4	EVALUATION OF RESTORATION ALTERNATIVE 1: NO ACTION/NATURAL RECOVERY	38
4.5	EVALUATION OF RESTORATION ALTERNATIVE 2: ECOLOGICAL RESTORATION	38
4.5.1	Scaling Approaches	38
4.5.1.1	Lost Ecological Services	38
4.5.1.2	Seabirds	41
4.5.2	Preferred Alternative: Net Removal Project	43
4.5.3	Preferred Alternative: Predator Control in Newell's Shearwater Colonies on Kauai	44
4.5.4	Preferred Alternative: Predator Control and Habitat Enhancement on Offshore Islands in the Hawaii Seabird Sanctuary	46
4.5.5	Preferred Alternative: Extension of the Predator Fence at Kilauea Point National Wildlife Refuge on Kauai	48
4.5.6	Non-Preferred Alternatives	50

4.6	EVALUATION OF RESTORATION ALTERNATIVE 3: LOST HUMAN USE RESTORATION	51
4.6.1	Scaling Approach	51
4.6.2	Preferred Alternative: Beach Cleanup Project	52
4.6.3	Non-Preferred Alternatives	53
5.0	COORDINATION WITH OTHER PROGRAMS, PLANS, AND REGULATORY AUTHORITIES	54
5.1	OVERVIEW	54
5.2	KEY STATUTES, REGULATIONS AND POLICIES	54
5.3	OTHER POTENTIALLY APPLICABLE LAWS AND REGULATIONS	60
6.0	PREPARERS, AGENCIES, AND PERSONS CONSULTED	61
6.1	U.S. DEPARTMENT OF THE INTERIOR	61
6.2	NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION	61
6.3	STATE OF HAWAII	61
7.0	REFERENCES	62
8.0	BUDGET	68
APPENDICES		
A.1	ACRONYMS	69
A.2	INDEX TO ADMINISTRATIVE RECORD	70
A.3	PUBLIC MEETING SUMMARY	76
A.4	PUBLIC COMMENTS AND RESPONSES	79
A.5	TRUSTEE ADOPTION OF THE FINAL RESTORATION PLAN	84
A.6	FINDING OF NO SIGNIFICANT IMPACT	86

LIST OF TABLES.

1.	Potentially injured resources and associated assessment methods	17
2.	Chronology of assessment activities for seabird injuries in the Incident.	24
3.	Results of seabird colony surveys following the Incident.	25
4.	Estimated population size and number of seabirds potentially exposed to oil during the Incident.	29
5.	Number of oiled birds recovered or observed during the Incident.	30

LIST OF FIGURES:

1.	Aerial surveys of the abundance and distribution of seabirds on October 6, 7, 8, 1998 within the potential oil exposure area for the Incident	27
2.	Estimated foraging range of seabirds oiled in the Incident	27
3.	Location of oiled birds recovered on the Island of Kauai following the Incident	31

MAPS/CHARTS:

1.	Hawaiian Islands Maps/Charts by NOAA mapfinder program (www.mapfinder.nos.noaa.gov)	8, 18
2.	Kauai NWR location map by USFWS (www.r1.fws.gov/pacific/wnwr/kkilaueanwr.html)	12
3.	State of Hawaii seabird sanctuaries and other seabird sanctuaries (USFWS)	13

PHOTO CREDITS:

1.	Green sea turtle - G. Siani, ©2000.	10
2.	Hawaiian monk seal - USFWS (www.r1.fws.gov/pacific/wnwr/kkilaueanwr.html)	10
3.	Humpback whale - NMFS (www.nmfs.gov)	11
4.	Opihi - Waikiki Aquarium (waquarium.mic.hawaii.edu/)	11
5.	Brown-footed booby - USFWS	30
6.	Red-footed booby - USFWS	30
7.	Nukoli'i Beach. C. Carlson, NOAA, 1998.	32
8.	Fugii Beach. C. Carlson, NOAA, 1998	32

1.0

**I
N
T
R
O
D
U
C
T
I
O
N**

1.0 INTRODUCTION: PURPOSE OF AND NEED FOR RESTORATION

1.1 INTRODUCTION

The purpose of this document is to provide summarized information regarding the affected environment, natural resource injury determinations and natural resource restoration projects resulting from the August 24, 1998 Tesoro Hawaii Corporation's (Tesoro) oil spill (Oahu and Kauai, Hawaii). This document also serves, in part, as the agencies' compliance with the National Environmental Policy Act (NEPA) and the State of Hawaii equivalent (see Section 5 for additional information). The public may review and provide comments on the planned restoration activities.

On August 24, 1998, there was a hose failure at Tesoro's single-point mooring located offshore of Barbers Point, near Honolulu, Oahu, Hawaii (USCG 1998a). The mooring is a floating buoy used to transfer crude oil and refined products between ships and the refinery onshore. Bunker fuel was being piped into the *Oversea New York*, a tank vessel that was also delivering crude oil to the Tesoro storage facility onshore. A sheen was reported at approximately 2000 hours. At the time, Tesoro estimated the spill at 10 barrels or 420 gallons. The United States Coast Guard (USCG), the State of Hawaii Department of Health (DOH), and Tesoro responded to the spill and mobilized cleanup efforts. After recovery of the visible oil in the general vicinity of the offshore single-point mooring, the Unified Command demobilized the spill response because of the inability to find any more recoverable oil.

However, beginning on or about September 5, 1998, tarballs and dead oiled birds began to come ashore on the northeastern shore of Kauai, over 100 miles from Tesoro's single point mooring off Barbers Point. On September 11, 1998, the USCG matched, through chemical analysis, the tarballs and oiled dead birds from Kauai with the oil from the Tesoro spill on Oahu. The oil was reported to be coming ashore at Kauai's Barking Sands, Polihale, Nukoli, Fujii, and Kipu Kai beaches (see Section 3.3). Based on these additional reports and mass balance calculations, Tesoro officials estimated that up to 117 barrels of bunker oil (approximately 4,914 gallons) may have been spilled as a result of the August 24, 1998 hose failure. The USCG, Tesoro and various oil spill response contractors conducted the cleanup on Kauai.

This oil spill is referred to in this Final Restoration Plan and Environmental Assessment (Final RP/EA) document as the "Incident." Tesoro is the Responsible Party for this Incident.

Oiling of shoreline, intertidal and subtidal areas potentially affected a variety of natural resources, including:

- seabirds and their habitat, including some threatened and endangered species under the Endangered Species Act (ESA);
- Hawaiian monk seals (*Monachus schauinslandi*) (= *Ilio holo i ha uaua*) and their habitat, a species listed as endangered under the ESA;
- intertidal and subtidal habitat and biota in those habitats such as invertebrates, algal communities, and opihi (*Cellana* sp.), which is a commercially and culturally valuable species; and
- beaches and associated recreational and subsistence activities (see Section 3).

Immediate cleanup measures following the Incident were undertaken at the direction of a Unified Command which included the USCG, DOH and Tesoro. Cleanup measures on Kauai included removing tarballs from shoreline areas, combing and sifting the shoreline for pellets of oil, and scrubbing oiled boulders. The responders did not use dispersants or any chemical cleaning agents. Oiled birds were cleaned and rehabilitated at facilities on Kauai, Maui, and Oahu. Birds were also released from sites on each of these islands. The Pollution Reports (called "polreps"), prepared by the USCG's Marine Safety Office in Honolulu, summarize and describe the chronology of events in 1998 associated with response and cleanup activities during the Incident (USCG 1998a). These reports are part of the administrative record for this spill.

1.2 NATURAL RESOURCE TRUSTEES AND AUTHORITIES

Both federal and State of Hawaii laws establish liability for natural resource damages to compensate the public for the injury, destruction, and loss of such resources and/or their services resulting from oil spills.

This Final RP/EA has been prepared jointly by the U.S. Department of the Interior (DOI), the U.S. Fish and Wildlife Service (USFWS), an agency of the DOI; the U.S. Department of Commerce, represented by the National Oceanic and Atmospheric Administration (NOAA); and the State of Hawaii, represented by the DOH and the Department of Land and Natural Resources (DLNR). Collectively these agencies are referred to as the "Trustees" or "Natural Resource Trustees."

Each of these agencies acts as a Natural Resource Trustee pursuant to the Oil Pollution Act of 1990 (OPA) (33 USC §§ 2701 *et seq.*), and the National Oil and Hazardous Substances Pollution Contingency Plan (NCP) (40 CFR § 300.600), for natural resources injured by the Incident. Executive Order (EO) 12777 designates the federal Trustees for oil spills while the Governor of Hawaii designates the State Trustees for oil spills in Hawaii. As a designated Trustee, each agency is authorized to act on behalf of the public under state and/or federal law to assess and recover natural resource damages and to plan and implement actions to restore natural resources and resource services injured or lost as the result of a discharge of oil. The Trustees designated the USFWS as Lead Administrative Trustee (LAT) (15 CFR § 990.14(a)).

The State of Hawaii acts under the authority of its Environmental Response Law (Haw. Rev. Stat., Title 10, Ch. 128D). This authority is in addition to any liability which may arise under federal law.

1.3 OVERVIEW OF OIL POLLUTION ACT OF 1990 REQUIREMENTS

Under OPA, Trustees can recover the cost of restoring, rehabilitating, replacing or acquiring the equivalent of the injured natural resources ("primary restoration"); the diminution in value of those injured natural resources pending restoration ("compensatory restoration"); and reasonable assessment costs.

Before initiating a natural resource damage assessment (NRDA), the Trustees must determine that an incident has occurred; the incident is not from a public vessel; the incident is not from an onshore facility subject to the Trans-Alaska Pipeline Authority Act; *the incident is not permitted under federal, state or local law*; and public trust natural resources and/or services may have been injured as a result of the incident.

Natural resources are defined as "land, fish, wildlife, biota, air, ground water, drinking water supplies, and other such resources belonging to, managed by, held in trust by, appertaining to, or otherwise controlled by the United States, any State or local government or Indian tribe" (15 CFR § 990.30). Injury is defined as "an observable or measurable adverse change in a natural resource or impairment of a natural resource service" (15 CFR § 990.30). As described in the OPA regulations, a NRDA consists of three phases -- preassessment, restoration planning, and restoration implementation.

Based on information collected during the preassessment phase, the Trustees make a preliminary determination as to whether natural resources and/or services have been injured and/or are likely to be injured by the release. Through coordination with response agencies (e.g., the USCG), the Trustees next determine whether the oil spill response actions will eliminate the injury or the threat of injury to natural resources. If injuries are expected to continue and feasible restoration alternatives exist to address such injuries, the Trustees may proceed with the restoration planning phase. Restoration planning also may be necessary if injuries are not expected to continue or endure but are nevertheless suspected to have resulted in interim losses of natural resources and/or services from the date of the incident until the date of recovery.

The purpose of the restoration planning phase is to evaluate the potential injuries to natural resources and services and to use that information to determine the need for and scale of associated restoration actions. This phase provides the link between injury and restoration and has two basic components -- injury assessment and restoration selection. The goal of injury assessment is to determine the nature and extent of injuries to natural resources and services thus providing a factual basis for evaluating the need for, type of, and scale of restoration actions. As the injury assessment is being completed, the

Trustees develop a plan for restoring the injured natural resources and services. The Trustees must identify a reasonable range of restoration alternatives, evaluate and select the preferred alternative(s), develop a draft restoration plan presenting the alternative(s) to the public, solicit public comment on the draft restoration plan, and incorporate comments into a final restoration plan.

During the restoration implementation phase, the draft restoration plan is presented to the Responsible Party to implement or to fund the Trustees' costs for assessing damages and implementing the restoration plan. This provides the opportunity for settlement of damage claims without litigation. Should the Responsible Party decline to settle, OPA authorizes Trustees to bring a civil action against Responsible Parties for damages or to seek reimbursement from the USCG's Oil Spill Liability Trust Fund.

Trustees may settle claims for natural resource damages under OPA at any time during the damage assessment process, provided that the settlement is adequate in the judgment of the Trustees to satisfy the goals of OPA and is fair, reasonable, and in the public interest, with particular consideration of the adequacy of the settlement to restore, replace, rehabilitate or acquire the equivalent of the injured natural resources and services. Sums recovered in settlement of such claims, other than reimbursement of Trustees' costs, may only be expended in accordance with a restoration plan, which may be set forth in whole or part in a consent decree or other settlement agreement, which is made available for public review.

1.4 COORDINATION WITH THE RESPONSIBLE PARTY

The OPA regulations direct the Trustees to invite the Responsible Party to participate in the damage assessment and restoration process. Although the Responsible Party may contribute to the process in many ways, final authority to make determinations regarding injury and restoration rests solely with the Trustees.

To facilitate the NRDA for this Incident, the Trustees and Tesoro executed the "Joint Cooperative Natural Resources Damage Assessment Agreement for the Tesoro/Hawaii SPM Oil Spill" (Cooperative Agreement), effective November 13, 1998. In the Cooperative Agreement, the Trustees and Tesoro agreed to conduct a phased approach focusing on injury determination and quantification using technical working groups (TWGs) composed of Trustee and Tesoro representatives. A Trustee representative headed each TWG. The Trustees and Tesoro established four TWGs for the following injury categories: seabirds, marine environment (opihi), marine mammals (Hawaiian monk seal), and human use. Tesoro agreed to fund the activities of the TWGs and all cooperative studies and to reimburse the Trustees for reasonable damage assessment costs.

While the injury determination and quantification phases were underway, the Trustees and Tesoro recognized the difficult scientific challenges presented by this spill and decided to

expedite the process. They acknowledged that time delays in planning and contracting for several studies made those studies impractical. Other studies would span a multi-year time period and it was uncertain whether the additional information that might be gained from those studies would justify the increased costs of assessment or that the results would increase the precision and accuracy of the injury assessment. The Trustees and Tesoro agreed that the time and money would be better spent identifying and scaling restoration projects that would be conservative enough to address the potential injuries. The Trustees and Tesoro believe that the restoration projects proposed in this Draft RP/EA are designed to provide more than sufficient restoration value because, in large part, there was no cost effective, reliable scientific approach which would define with accuracy the injuries resulting from the spill. By expediting the process, the Trustees and Tesoro could minimize assessment costs and proceed with restoration of injured resources and services sooner, in an effective and efficient manner.

Although an expedited procedure such as this saves time and money by avoiding a potentially lengthy assessment process, it also requires the Trustees and the Responsible Party to accept a level of uncertainty concerning the nature and extent of injuries and the amount of restoration necessary to address the injuries. The Trustees, however, believed that it was in the public's interest to focus on the planning and implementation of restoration projects in lieu of undertaking full assessment-type studies. This approach is consistent with that used by the Trustees in the 1996 Chevron pipeline spill into Waiau Stream and Pearl Harbor.

The Trustees and Tesoro have produced documents that have been shared with each other in an attempt to present known or potential injuries or losses of natural resources and services and to identify candidate assessment strategies. Coordination between the Trustees and Tesoro helped to reduce duplication of studies, increase the cost-effectiveness of the assessment process, increase sharing of information, and decrease the likelihood of litigation. The Trustees sought input from Tesoro and considered such information, when provided, throughout the NRDA process.

1.5 PUBLIC PARTICIPATION

Public review of the Draft RP/EA is considered an integral component to the restoration planning process. Through the public review process, the Trustees seek public comment on the approaches used to define and estimate natural resource injuries and the projects being proposed to restore injured natural resources or replace services provided by those resources. The Draft RP/EA provided the public with information about the nature and extent of the natural resource injuries identified and the restoration alternatives evaluated.

Following public notice on June 7, 2000 (*Honolulu Advertiser, Garden Island*), the Draft RP/EA was made available to the public for a comment period ending July 10, 2000. The Draft RP/EA was made available to the public in three ways: in electronic form for viewing and downloading on the world wide web (www.darcnw.noaa.gov/tesoro.htm), as part of the

publicly-available Administrative Record, and in hard copy by request. In addition, a public meeting was held on June 21, 2000 at the Kapaa Public Library, Kapaa, Kauai, Hawaii to present the Draft RP/EA to the public and invite public comment. Appendix A.3 provides a brief summary of the public meeting discussions. The Trustees' responses to the two written comments received during the public comment period can be found at Appendix A.4.

Public review of the Draft RP/EA is consistent with all federal and state laws and regulations that apply to the NRDA process, including Section 1006 of OPA, the OPA regulations (15 CFR Part 990), NEPA, as amended (42 USC §§ 4371 *et seq.*), and its implementing regulations (40 CFR Parts 1500-1508). Comments received during the public comment period were considered by the Trustees in preparing the Final RP/EA.

After an analysis of the public comments on the Draft RP/EA, the Trustees determined that the Restoration Plan could be adopted as a final Plan without modifications to the proposed projects. The Adoption Resolution is provided at Appendix A.5. A Finding of No Significant Impact (FONSI) determination was made by the federal Trustee agencies (Appendix A.6).

1.6 ADMINISTRATIVE RECORD

The Trustees have compiled an administrative record which contains documents considered by the Trustees as they have planned and implemented the NRDA and addressed restoration and compensation issues and decisions. The administrative record is available for public review at the public repository listed below and at a NOAA website --www.darcnw.noaa.gov/tesoro.htm. The administrative record index is provided in *Appendix A.2 of this Final RP/EA*.

The administrative record facilitates public participation in the NRDA process and will be available for use in future administrative or judicial reviews of the Trustees' actions to the extent provided by federal or state law. Additional information and documents, including public comments received on the *Draft RP/EA*, the *Final RP/EA*, and other related restoration planning documents, will become a part of the administrative record and will be submitted to the public repository upon their completion.

The documents comprising the administrative record can be viewed at the following location:

U.S. Fish and Wildlife Service
Department of the Interior
300 Ala Moana Boulevard, Room 3-108
Honolulu, HI 96850
Phone: (808) 541-3441
Hours: Monday - Friday: 8:00 am - 4:00 pm

Please call the telephone number above to arrange for an appointment.

1.7 SUMMARY OF THE NATURAL RESOURCE DAMAGE CLAIM

The NRDA damage claim for the Incident encompasses compensatory restoration actions for potential injuries to the following natural resources and services:

- *intertidal and subtidal habitat and biota in those habitats,*
- *endangered Hawaiian monk seals,*
- *seabirds, and*
- *loss of subsistence and recreational activities or services.*

The proposed compensatory restoration actions include:

- *conduct predator control and habitat enhancement activities for seabirds potentially affected by the spill;*
- *remove fishing nets from shoreline, adjacent intertidal and subtidal areas in the general area impacted by the spill along the coast of Kauai to address potential injuries to these habitats and biota in those habitats and reduce the likelihood of monk seal entanglement in stranded nets/debris; and*
- *contribute to funding beach cleanup activities to compensate for lost or diminished human use during the oil spill and subsequent cleanup operations.*