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**Whale Hunting and the Makah Tribe:
A Needs Statement**

Ann M. Renker, Ph.D.
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Whale Hunting and the Makah Tribe

I. EXECUTIVE SUMMARY

This document presents information pertinent to the continuation of the Makah subsistence whale hunt, and is presented in two parts: a cultural component and a nutritional component. The cultural component contains seven distinct sections. First, there is a brief cultural abstract, which discusses the anthropological framework that surrounds the Makah culture and language. The next section discusses the prominent place that whaling has always occupied for traditional Makah people; it is followed by a section that discusses Makah whaling through time. Modern Makah whaling efforts and activities are the focus of the next two sections, which concentrate on the two quota periods 1998-2002, and 2003-2007, respectively.

The latter section is divided into three parts: Marine Mammal Management, Cultural Activities, and Legal Obstacles and Processes. The arrangement of this information is necessary for a few reasons:

1. In 2003, the Makah Tribe incorporated a Marine Mammal Management Program (MMMP) into its Fisheries Management Office. The Tribe hired a full-time, permanent marine mammal biologist who could plan and conduct research, collect and interpret data, and coordinate management efforts with other local and national organizations, such as the National Marine Fisheries Service (NMFS) and the National Oceanic and Atmospheric Administration (NOAA). The development of the MMMP also enabled the Makah Tribe to participate in the scientific and conservation efforts of the International Whaling Commission, and make important contributions to global efforts to manage cetacean populations.
2. Data collected during the initial Household Whaling Survey in 2001 (Renker 2002) indicated that the Makah people were anxious to learn as much as they could about several sets of information that related to traditional whaling practices: restoring and expanding the spiritual connection between whaling and Makahs, utilizing whale products efficiently, and increasing skills related to proper hunting techniques. From 2003 to 2007, the Makah Tribe devoted time, effort, and money to educate its people about these sets of information. The Tribe also worked to share information with non-members, in hopes of creating a more accepting atmosphere for traditional practices.

3. Domestic legal entanglements have surrounded Makah whaling since the quota period 1998-2002, and have continued into this quota period. A summary of these legal obstacles and processes has been prepared with the assistance of the Tribe's attorneys, and is incorporated into this document.

The last section of the cultural component continues with a section that discusses the Makah reservation in 2007, and concludes with information from the second Makah Household Whaling Survey (Renker 2007); this tool generated a quantified opinion profile about whaling from the modern Makah community. The Tribe specifically commissioned the second survey so objective information about the Makah community's sentiments regarding whaling would be available to local, national, and international organizations.

The nutritional component is one integrated section. It presents research and information that establishes the unique genetic relationship between indigenous people and their diet prior to contact with western, non-traditional foods, a nutritional science now termed nutrigenomics (Ordovas 2006). The component also presents seminal, long-term research conducted by the National Institutes of Health which proved that a Tribal diet that includes non-traditional foods (like processed and refined flours and sugars), and deletes traditional foods, is linked to devastating, chronic illnesses like diabetes. Most specifically, the component presents the theory that the prevalent occurrence of certain chronic illnesses and conditions in the modern Makah community is the result of a lack of whale-based food products. Finally, the component presents an argument that indicates greater health in the Makah community could result from a reintroduction of whale-based food products into the regular diet. Nutritional research that links cardiovascular health to the consumption of n-3 polyunsaturated fatty acids (PUFAs) found in marine mammal oils (Bang Ho, et al 1971, Dyerberg, et al 1977, Dewailly et al, 2001) is also included.

When considered as a complete document, The Needs Statement demonstrates the following points:

1) Whale hunting for subsistence purposes is an activity Makahs practiced for at least 1,500 years before the present day. Documented use of whale products for subsistence purposes extends another 750 years before this date, since Makahs used drift and stranded whales long before hunting technology developed. Continuation of the restored whale hunt will maintain important subsistence benefits reintroduced to the

Makah community during the single successful whale hunt in 1999. This benefit increases in importance as the unemployment rate on the Makah Reservation remains high and as salmon and other Pacific fishing stocks continue to vary in abundance and be subject to federal controls due to environmental concerns. In addition, increasing variance in international and domestic fishing quotas diminish the reliability of the marine subsistence component for the Makah Tribe, along with the environmental pressures exerted by oil spills, red tides, pollution, and other factors beyond the control of the Tribe. Gray whales are a reliable resource that can offset subsistence pressures from other sources.

2) For 1500 years, whale hunting and its associated components have had important ceremonial and social functions for the Makah community, in addition to the provision of subsistence benefits. The importance of this ceremonial and subsistence practice is demonstrated in the Treaty of Neah Bay, signed in 1855. Makah negotiators insisted that the right to hunt whale be included in the treaty; this right is reserved in Article IV, and is discussed in more depth later in this document.

Elders and anthropologists trace the decline of the social and physical health of the tribe to the elimination of the whale hunt and its associated ceremonial and social rigors. A community household survey conducted in 2006 December demonstrated that an overwhelming majority (79.6%) of the village believes that the resumption of the whale hunt has positively affected the Tribe, and 54.8% specifically cited moral and social changes as the most important benefit. Clearly, the Makah people believe that the successful hunt in 1999 contributed to the physical and mental health of the reservation, but express concern about the domestic legal obstacles that prevent hunting at this time. While continuation of the hunt would certainly maintain the internal successes that the Tribe experienced, members fear that social and psychological demoralization will result if the Treaty right to hunt whales is not recognized.

The revitalization of the hunt allowed Makahs an additional mechanism to help connect traditional Tribal values about health and spirituality to modern life. This connection assisted young and old in conquering the vicissitudes of modern life. The Tribe needs access to the social and spiritual values of whaling, as well as the addition of traditional food into its diet. To be denied any further opportunities to unite with the

traditional practices of their ancestors would introduce a new shroud of oppression into the daily life of Makah people.

3) The Household Whaling Survey II (Renker 2007) provides an important tool that quantifies the opinions of the Makah community in regards to whaling. Data indicated that an overwhelming majority of Makah respondents (88.8%) support the Makah whale hunt, and that most reservation households now desire whale products to be a regular part of their diets. For example, 71.7% of survey respondents wanted whale meat in their households on a regular basis, and 67.1% of the survey respondents felt the same way about whale oil. (Survey results are discussed in detail in later sections of this document.) The results of this survey present a clear picture of the mainstream opinion of the Makah people, that whaling is directly linked to the spiritual, psychological, and physical health of the Tribe.

4) The Makah Tribe has been actively involved in the management and protection of its wealth of resources for millennia. For thousands of years, the Makahs achieved and maintained a functional balance with many land, air, and ocean species, especially the gray and humpback whales. This carefully constructed dynamic was upset during the years of unregulated, non-Native whale hunting on the Pacific Coast. The Makah whale hunt has taken only one whale from the Eastern North Pacific gray whale stock, a miniscule amount in comparison to the total aboriginal subsistence harvest of approximately 124 whales per year (IWC 2006). In fact, current figures indicate that the gray whale population continues to maintain healthy numbers, and "is likely at the carrying capacity of its environment" (NOAA 2002). The introduction of a Marine Mammal Management Program staffed by a full-time, permanent biologist moves Makah management and protection of the gray whale resource into the 21st century, and elevates the Tribe's scientific partnership to global levels.

5) The Makah people can now actively demonstrate the continuing existence of their 2,000-year-old subsistence culture. The whale had always played an integral part in the subsistence practices of the Makah Tribe, save the brief seventy-year period which commenced in the 1920s. While the decimation of the whale herds made it virtually impossible for Makahs to procure the food which traditionally carried the most extraordinary social, cultural, and nutritional benefits, a restored hunt would provide modern Makahs with a rich source of traditional foods which are nutritionally superior to many non-indigenous provisions which are available to the community.

The gray whale population is currently at a healthy level. The Makah subsistence and ceremonial need to take whales should continue to be recognized and respected. Since the Tribe has a conservation record of considerable time depth, and in recent years has formally established a Marine Mammal Management Program, a limited subsistence whale hunt will continue to be easily managed within scientifically accepted conservation parameters. More importantly, another shared five-year quota of twenty whales, including up to five whales in any given year, will maintain the benefits secured for future generations of Makah people by the Treaty negotiators.

The Makah request for five whales is predicated on the fact that Tribal membership is now composed of the residents of the five traditional Makah villages which were consolidated during the early years of the Reservation. Since Treaty times, the Makah Tribe has always represented itself as a nation which began as five villages. This request honors this tradition, and asks for one whale per village.

In addition, a review of the ethnographic literature finds that the number five, whether an actual figure or an average, appears multiple times in discussions of early historic harvests (Jewitt 1815, Cavanaugh 1983, Huelsbeck 1988). Five whales per year did not create an undue population stress for a healthy gray whale stock in the years prior to 1830, and would not adversely affect the current, healthy population of the Eastern North Pacific stock.

Method Statement

Interpretation of Makah history, culture, and language is accomplished through the juxtaposition of a variety of sources. By evaluating evidence from Makah archaeological sites (like Ozette), in conjunct with oral histories, linguistic information, ethnographies, and early written records of traders, explorers and agency employees, one generates a cultural profile that simultaneously integrates and cross-references these distinct sources of data.

The primary source of archaeological data substantiating the existence of Makah pre-Treaty whale hunts and offshore fisheries is the Ozette Collection, the largest and most comprehensive collection of pre-contact Makah artifacts in the world. The Ozette village was one of five pre-contact Makah villages which were occupied throughout the year: **di·ya** or Neah Bay; **bi?id?a**

or Biheda; **wa?ac'** or Why-atch; **c'u.yas** or Tsoo-Yess; and **?use·?i=** or Ozette (Taylor 1974). Unlike the others, Ozette was partially buried by a catastrophic mudslide approximately 400 years ago. A massive archaeological excavation from 1970 - 1981 uncovered 50,000 artifacts that were remarkably well preserved; these artifacts tell the story of the Makah culture as it was prior to contact with non-Indians (Wessen 1982, Huelsbeck 1983).

When interpreting the anthropological literature, a standard procedure relating to the classification of the Makah culture as a member of the Nootkan cultural group was followed. The Makah culture is the only example of a Nootkan culture outside of Canada; all other Nootkan groups reside along the western and southwestern coast of Vancouver Island. Scholars recognize the close relationship between Makah and the other members of the Nootkan cultural category (Curtis 1911, Drucker 1951, Driver 1969, Arima 1990, Renker 1994). It is therefore standard practice to consider sources relating both to the sub-group which is the focus of inquiry (Makah), and nearby closely related sub-groups on Vancouver Island (**nu·ca·nu·=** bands).

For the nutritional component of the Needs Statement, the document utilized the methodology and definitions endorsed by the United Nations University and the International Union of Nutrition Science's Committee on Nutritional Anthropology.

The methodology for the Household Whaling Survey II (Renker 2007) is discussed in Appendix 3.

Definitions

Pre-contact refers to the chronological time period prior to 1788. **Historic** refers to the chronological time period from 1788-1933. **Contemporary** refers to the chronological time period from 1934 till today.

A Makah elder is an individual who is enrolled in the Makah Tribe, is over 75 years of age, and is a native speaker of the Makah language.

Westcoast refers to the generalized cultural group of Makah, Nitinaht, and Nootkan peoples. **nu·ca·nu·=** refers only to Nitinaht and Nootkan peoples since these people are closely related subgroups who live on Vancouver Island.

Subsistence refers to the anthropological concept that a particular food product or supplement is directly acquired by

the people who will use the item for local consumption and nutritional purposes.

Linguistic and Other Conventions

Elements of the Makah language (morphemes, words and the like) are printed in **bold** type to enhance visibility. Because of the limitations affecting the preparation of this opinion, I use a variation of the Makah Alphabet. A key to the adaptation used in this document is included in Appendix 1.

Indented citations with quotation marks are taken from oral histories. Indented citations without quotation marks are from written sources.

II. WHALE HUNTING AND THE MAKAH TRIBE: THE CULTURAL COMPONENT

Cultural Abstract

Anthropologically, the Makah culture is classified within the Nootkan sub-division of Northwest Coast cultures. The Makah people speak a language, **q**i*·q**i*·diccaq**, which is classified as a member of the Wakashan language family. The Makah Tribe is the only representative of the Nootkan cultural classification and the Wakashan language family in the United States (Renker and Gunther 1990; Renker 1994).

Classic descriptions are exemplified in Swan (1870), Curtis (1911), Waterman (1920), and Densmore (1939); some of the more recent publications include Renker (1994) and Renker and Gunther (1990), which span pre-contact through contemporary times, as well as Parker-Pascua (1991), which concentrates on Makah pre-contact life. Like all cultures termed Northwest Coast cultures by anthropologists, the classification is based upon factors first identified in these cultures as each existed in early historic times. Makah culture exhibits a number of characteristic Northwest Coast traits and trait complexes, including:

1. Emphasis on achieved wealth as measured in property and hereditary rights;
2. Complex pattern of social stratification;
3. A highly developed painting and wood carving style;
4. A material culture based on the abundance of the wood resource in the area, especially when related to the absence of other technologies, such as ceramics; and
5. A subsistence pattern based on the utilization of available marine, riverine, subtidal and intertidal resources, as well as a predictable supply of anadromous fish.

The factors which further classify the Makah culture within the Nootkan sub-division provide a more detailed list of items which distinguish the Makah culture from other American Northwest Coast cultures. These factors include: a) the integration of rank and kinship as the basis for social interaction (Drucker 1951); b) the integration of land and sea spirits in the ceremonial complex which featured both inclusive and exclusive secret societies and events (Curtis 1911, Sapir 1939, Sapir and

Swadesh 1955); c) the development of a highly regulated system of ceremonial and economic privileges, including the ownership of, and control over, tangible and intangible properties such as whaling grounds, fishing grounds, and other sections of ocean and river property (Curtis 1911, Densmore 1939, Drucker 1951); and d) the development of ocean-going technologies like fixed referent navigation and the construction of sea-worthy canoes (Drucker 1951, Renker and Pascua 1989).

These last technologies are prominent components in the most dramatic pursuit of the Makah Tribe: whale hunting. Several Pacific coastal Tribes utilized dead whales which happened to drift onto the shore, or cultivated ritualists who actively used sympathetic magic to entice these drift animals. In contrast, the Makahs and some of their Vancouver Island relatives were famous for their active and aggressive hunt of these large sea mammals (Swan 1870, Waterman 1920, Densmore 1939).

The Whaling Culture of the Makah Tribe

The relationship between Makah people and whales is one of great antiquity. Archaeological data from a recent excavation at the Makah village of Wa-atch indicate that whalebones were present some 3,850± 75 years b.p. (before present) (Wessen 1994). Food use of drift and stranded whale predated hunting technology. Better-known data from the Ozette site demonstrate some 1,500 years of continuous whale use. This practice continued through the period of contact with non-Indians, and persisted into this century. Recorded history provides a variety of dates for the last Makah whale hunt prior to 1999; it probably happened during the latter half of the 1920s (Laut 1928).

Archaeological and ethnohistorical data demonstrate that Makahs hunted a variety of species of whale which traveled through their territory, including the gray (Eschrichtius robustus), humpback (Megaptera novaeangliae), finback (Balaenoptera physalus), and right whales (Eubalaena glacialis). Huelsbeck (1988a:5) discusses the traits which make both gray whales and humpbacks attractive prey. In addition to swimming slowly and near the shore, both types of whales could appear during the summer. Humpbacks have also been known to migrate along the coast, but not to the extent that gray whales do. Non-Indian whale hunters characterize the gray as the more aggressive species of the two during a hunt (Hagelund 1987).

There is no doubt that Makah people hunted whale in pre-contact times, and that the hunt was an important subsistence activity. The Ozette site yielded whale hunting gear and over 3400 whale bones, including whale bones with embedded harpoon shell blades (Huelsenbeck 1988a:1).

The archaeological record is supported by ethnographic sources like the Jewitt Narrative, one of the most interesting and important first person accounts generated during the European exploration of the Pacific Northwest Coast. John Jewitt was one of the surviving crewmembers of the ship Boston, which was ravaged and sunk by the **nu·ca·nu·**= Chief, Maquinna, in Nootka Sound in 1803. Jewitt remained in Maquinna's service as a slave until his rescue in 1805, and recorded his experiences and observations in a diary first published in 1815.

In spite of his ethnocentrism and lack of knowledge of **nu·ca·nu·**= culture, Jewitt's observations remain a key document in the early historical record of the era. Jewitt describes the enormous amount of time Maquinna and his crew invested in the pursuit of offshore whales in 1804 and 1805. During these years, Maquinna had only one successful hunt.

Cavanaugh (1983) indicates that Maquinna's lack of whale hunting success during the 1804 and 1805 seasons at Nootka Sound was not indicative of the fate of other hunters. While Maquinna secured one whale during Jewitt's captivity, hunters procured an additional four whales. Simple addition indicates that the people of Nootka Sound had the food and product resource of five hunted whales at their disposal.

According to Huelsenbeck, calculations produce a scenario based on abundance, rather than paucity. Using a very conservative estimate, the five whales caught at Nootka Sound "would have provided between 16.25 and 37.5 metric tons of blubber, and could have provided a similar amount of meat, depending on whether or not the California gray or the larger humpback whale was taken" (Huelsenbeck 1988b:3). This huge quantity of meat and blubber could have provided between 32.5 and 150 kg. of edible whale product per person for a village with a population of 500 individuals (Huelsenbeck 1988b:4).

Certainly the number of whales taken by all Makah crews varied from year to year. A minimum of 67 whales were "represented by the bones recovered from the late prehistoric level" at Ozette (Huelsenbeck 1988a:7), constituting a huge quantity of food products and raw material. Based on historic documents,

Huelsbeck estimates that whalers of the Yuquot band, a **nu·ca·nu·** group, "would have averaged 5 whales per year" (1988:157). Densmore reports a much higher success rate for historic Makah whale hunters. "In old times the average catch for a whaler was one or two whales a year, but a man often caught four and occasionally five in a season" (1939:63). Wilcox (1895:20) provides a more conservative appraisal of the Makah whale hunt for the years 1889-1892. His figures indicate that the Makah Tribe averaged 5.5 whales per year (as cited in Huelsbeck 1988: 152) at a time when the cetacean population had already been severely impacted by other, non-Makah whaling interests.

Makah whale hunting capitalized on the annual northerly migration of the gray whale, and the availability of the humpback in their waters. Archeological data corroborate Makah oral history in this regard. In the Ozette Collection, 50.51% of the whale bones identifiable by species were that of the gray, while another 46.51% came from the humpback (Huelsbeck 1988a:4). The remainder of the sample contained finback, right, sperm and killer whales. Huelsbeck interprets the archaeological and ethnohistorical data to indicate that the finback and right whales were hunted from time to time, while the sperm and killer whales "probably represent drift whales" (1988a:6), although some Makah families have oral traditions which involve hunting these species.

The impressive gray whale migration approximately occurs from March to May, and provided a predictable resource that could be harvested by eight-man whaling crews which set forth in large cedar canoes. In one hunting strategy, lookouts stationed at strategic points could see a whale and alert the proper individuals, providing enough opportunity for canoes at the ready to launch and chase the whales. (This type of whale hunt, termed an offshore hunt in Hagelund (1987) and Webb (1988), would be adopted by the non-Indian whaling interests in the area centuries later.)

Whale hunts were not restricted to this northerly migration, however. Densmore (1939:49) reports that Makahs distinguished spring whale meat from winter whale meat:

The whales that "run in the spring" and were known as "spring whales" were said to have red meat because they ate clams and other shellfish they scooped off the rocks. The "winter whale" was considered the best and had a layer of white fat on the outside and red meat underneath.

Whatever the season, the whale hunt tested the training and stamina of the entire crew. A lucky crew might take a whale within a few miles of shore, while some hunts found Makah crews towed thirty or more miles out to sea by an injured whale. Whale hunters told Densmore that

A wounded whale usually towed the canoe by means of the harpoon rope, held by the men, its speed depending on the severity of its wound. Sometimes the whale went so fast that the end of the canoe went down in the waves. This towing of the canoe might continue for three or four days, the whalers waiting until the whale became sufficiently weary to be dispatched (1939:52).

These great sea mammal hunts (Swan 1870, Waterman 1920), as well as interceptive and deep water fisheries, would not have been possible without a highly developed system of fixed referent navigation, and a keen understanding of the prevailing wind weather patterns in Makah marine territory. (One appreciates Makah navigational skills more thoroughly when one considers that Captain Cook failed to "discover" the opening of the Strait of Juan de Fuca because of the thick fog.)

An example of the Makah fixed referent system was provided by a Makah elder who has been fishing since the 1920s.

"There's a ridge on Vancouver Island, I think the main peak there is behind Carmanah Light, and that's Carmanah mountain. That's the highest one, and there's a ridge behind that as you venture to the west, one peak will show up behind that as you venture to the west, one peak will show up behind that high peak on the ridge. The first one is **c'akwaqabas**, the second one is **?a7qabas**, and then you have a low kind of ridge, it drops down for quite a ways, and then another peak shows up, and that's in...oh...mostly used for sealing grounds, called The Spit. Now I have electronic navigational equipment, and I look upon those landmarks to determine just where we actually were when we were one peak out, two peaks out, or seven peaks out."

When navigating out of sight of land, Makah seafarers relied on the prevailing winds and currents, as well as the shape of the waves and behavior of seabirds. For example, prevailing winds

in the early morning are mostly easterly, and their afternoon counterparts are mostly westerly. Makah canoes ventured out of the sight of land knowing that attention to wind, wave, and fauna would return the vessels to land.

Makah ocean voyagers also understood that these navigational techniques could lead them directly to prime offshore fishing and whaling areas. In the words of an experienced Makah fisherman,

"Prevailing currents can predict them. They run on schedule. They tell direction and duration... Once off shore, the current changes every six hours: north to south, then south to west, then west to north, then north to east. A massive current moves all the time. Currents are predictable and steady... able to predict spawning areas."

Great cedar canoes provided the means for Makah seafarers to travel these great distances offshore. Fisherman, sealers, and whale hunters each used a different type of canoe which varied in size. The whaling canoe was approximately 36 feet long (Pascua 1991) and five or more feet wide (Arima 1983:35). Carvers fashioned these vessels from a single cedar log, providing canoes that "deserve the very highest place for staunch seaworthiness, coupled with great manageableness (sic) and speed" (Waterman 1920:9).

A whaling crew consisted of a chief, or the whaler, and seven men. The whaler owned the canoe and the whaling equipment, and acted as the sole harpooner in the whaling canoe. He also owned important ceremonial privileges acquired through his hereditary status and his ability to interact with the natural and the supernatural to assure a successful hunt.

Other crew members included a steersman, a man responsible for managing the lines and buoys, numerous paddlers, and a man who had a unique responsibility once the hunt was over and the whale was dead. This crewmember, a diver, fastened the whale's mouth shut with a length of rope. In addition to sealing in gases which kept the whale afloat, fastening the mouth prevented water from filling the carcass and sinking it (Curtis 1911; Waterman 1920; Pascua 1991).

Whaling was restricted to the men who could physically and mentally withstand the rigors of intensive ritualized training, possessed the hereditary access to the position and its

ritualized knowledge, and/or underwent a supernatural encounter which engendered the gift of whaling ability (Waterman 1920:38-40, Gunther 1942, Drucker 1951:169-170).

All crewmembers underwent rigorous ceremonial and spiritual preparations prior to beginning a hunt; the success of the hunt depended as much on the observance of ritual as the strength and talent of the hunters (Sapir 1939:114).

From the white point of view, the matter of greatest concern would be the arrangement of the tackle within boat, and the methods of approaching and striking the quarry. From the Indian standpoint, however, the really important matter is the proper observance before and during the hunt of the various ceremonial performances for procuring help from the spirits. (Waterman 1920:38)

Curtis (1911) provides the most detailed accounts of rituals whalers used to prepare themselves for the hunt.

Prayers and numerous songs form a part of every whaler's ritual. The secrets of the profession are handed down from father to son. As soon as the boy is old enough to comprehend such matters and to remember his father's words, he is permitted to accompany the whaling crew on short expeditions. Now also begins his instruction concerning the most propitious spots for ceremonial bathing places in lakes and rivers considered the most dangerous. At the age of twelve he is taken at night and shown how to bathe and to rub his body with hemlock twigs so as to remove the human taint and render the body acceptable to the whale spirit which is being supplicated. Thereafter he bathes alone at intervals, while his instruction in prayers and songs continues until the father deems it proper to retire in the young man's favor (16).

These ceremonial rigors extended to the wives and relatives of the whaling crew, the chief's wife in particular. "Therefore, the whaler and his wife observe a long and exacting course of purification, which includes sexual continence and morning and evening baths at frequent intervals from October until the end of the whaling season . . . about the end of June" (Curtis 1911:16). This woman was expected to observe a strict set of behaviors while the crew was hunting on the ocean, or else cause havoc with the crew at sea. For example, the whaler's wife was

required to lie still and utterly motionless the entire time the crew was hunting on the ocean. Lack of attention to this and other proscribed behaviors could also result in the capture of a whale that was not fat or large enough, or cause the harpooned whale to run out to sea instead of in toward the shore (Gunther 1942).

Physical equipment was also important to the pursuit of the whale. Makah whaling equipment consisted of, but was not limited to: harpoons, sealskin floats, fathoms of line made from whale sinew, fathoms of line made from cedar, and a variety of knives (Curtis 1911:16). Detailed discussions of the equipment and its use are found in Swan (1870) and Waterman (1920). Makah archaeological excavations, most notably Ozette, produced assemblages of this equipment, some of which are now on display at the Makah Tribe's museum and cultural center.

There is an amazing continuity, which surrounds Makah whale hunting gear. Pre-contact whale hunting equipment found at Ozette is essentially equivalent to whale hunting gear used by Makahs during the middle and late historic period. This amazing continuity does not exclude innovation. Makah whale hunters appreciated innovation and the opportunity to improve the hunt. By the turn of this century, Wilson Parker, the Makah Whaler of Curtis' photo fame, used a metal Lewis Toggle Hook Harpoon Head on the end of his traditional yew wood harpoon, for example. Another innovation helped to cut the tedious and tiring job of endless paddling: whaling canoes accepted tows from steamers to and from the whaling grounds when the technology became available.

The Makahs hunted the variety of whales which swam in their traditional ocean areas, but favored the predictable gray whale. Descriptions of the hunt itself are available in Swan (1870), Curtis (1911), Waterman (1920), Drucker (1951), Arima (1983) and Pascua (1991).

It would take a long time to get close to the whale while it was on the surface. Eventually, the crew brought the canoe alongside approaching on the left side and from the rear where the whale could not see them. The right time to harpoon was when the whale was just submerging, with its flukes well under and swung towards the canoe so that the animal would swing away in reaction and not smash the canoe (Chief Jones, personal communication). The steersman watched to see the flukes were in the right position and

gave the signal to the harpooner who immediately drove the harpoon in behind the fore flipper. At once the canoe was swung sharply to the left away from the whale, and the first float was thrown out by the first right-handed paddler behind the harpooner who quickly crouched in the bow to avoid the line paying out. The next paddler back held his paddle under the line to have it run out smoothly from space before him. The dangerous moments lasted until all the line and floats were all out because someone could get caught in a loop or the canoe could be capsized or smashed in the first violent struggles of the whale before it sounded. Any disaster that happened was thought due to the incorrect observation of taboos or performance of rituals (Arima 1983:41).

Once the first harpoon had been driven into the whale and the first set of floats were secured, a long lance was used to "attack the whale, making it bleed profusely" (Densmore 1939:50). Makah whalers told Densmore that the process of killing a whale, from first harpoon to final dispatch, could take "three to four days" (1939:52).

The successful whaler and his crew now had to tow the enormous animal and navigate their precious whale back to land, a process which could take two days (Densmore 1939:52). Unfortunately, the long delay in landing the animal could allow putrefaction to begin, thus causing the loss of the meat. The blubber would not be adversely affected by this long journey back to the beach.

Ideally, the whaler wanted to land his prize on his own beach at his own village. Using the tide to help him, the whaler beached the carcass at high tide, "to get the bones of all his whales in one spot" (Arima 1983:43). If a whaler had to beach his catch on another whaler's beach, payments had to be made; these often consisted of portions of the whale.

As the whale was staked and readied to be butchered, the community gathered for this event. Strict protocol governed the butchering process, specifying which portions of the whale were to be cut in sequence. Some regulations identified the pieces of the whale which had to be decorated and ceremonially treated. Others specified which portions were distributed to crewmembers and other village inhabitants. "Then pieces were given to the rest of the Tribe in order of rank, a procedure which was always carefully observed" (Arima 1983: 43). In effect, the distribution of the whale reinforced the infrastructure of Makah society each time the process occurred.

The highly stratified nature of the Makah social system was a mirror of the status and structure involved in the entire process of the whale hunt. From ceremonial preparation, to the hunt itself, to the ultimate acts of butchering and distribution, Makah whaling actualized the social organization of Makah society. The man who acted as the harpooner for a crew was the chief, or headman, of a particular social group, usually the residents of a single longhouse. He owned the longhouse, the whaling canoe and the equipment. This man also retained the largest burden of ceremonial preparation. These two factors, a large degree of physical wealth and a close relationship with the supernatural, translated into power for the whalers in everyday life.

Whalers, or headmen, were ranked at the top of the pyramid of social standing which existed within a single longhouse. Each resident was affiliated with the headman in some way; this affiliation became the basis for ranking each individual within a residence group. Whaling generated a base from which these relationships were constantly reviewed and reinforced. A successful headman could offer prestige, protection and resources to the kin and non-kin residents of his longhouse. A headman who experienced consistent failure, ostensibly because of poor preparation and ineffective supernatural connections, could lose status within his household, and lose non-kin residents as a result. The loss of these residents often translated into a loss of physical wealth and social prestige for a headman.

The anthropological literature tends to concentrate on the role of high-status men in the whale hunt. Makah oral history and articles like Gunther (1942) demonstrate that women played an important social, ceremonial and practical role in the whale hunt complex. Men, for example, were not the only ones affected by relationship between the whale hunt and social status. The women who married whalers dominated the top of the female analog to the male status pyramid. These women, like their male counterparts, found their lives governed by the concept of primogeniture. While whalers tended to be the oldest son of the oldest son of a whaler, the whaler's wife tended to be the oldest daughter of an oldest daughter of a whale hunter. Matches between the oldest son of one whaler and the oldest daughter of another were the ultimate social goal of whaling families. These alliances united two powerful, wealthy families, and insured that consolidated social, ceremonial, and political power would be transmitted to another privileged

generation; this procedure is common to historical and contemporary royal families.

Oral history and anthropological documents attest to the fact that the Makah whale hunt generated a series of criteria, which governed social processes like status assignments, marriage preferences, and ceremonial displays. The community-at-large played an important role in the success of the whale hunt, even though its role is far less visible in the written record. While anthropologists were most interested in the ceremonial, social, and work activities of the privileged classes, it was the support labor that processed, preserved, and prepared the whale products, as well as conducted the trade activities. People of extraordinary talent in any of these activities were recognized and recompensed by those of higher social status. These people of talent, when combined with a high status chief, resulted in a longhouse with a reputation for great things.

Therefore, whale hunting provided more than a means of organizing social groups within a longhouse; the whale hunt also provided a mechanism by which longhouses in a single village related to each other. Accumulated ceremonial and economic wealth often provided a means to rank the whalers, or headman, vis a vis each other. This ranked order precipitated to the residents of each longhouse. In effect, whaling generated a social dynamic which ranked all Makah individuals within a residence group, a longhouse. The practice also generated a social dynamic which ranked all Makah individuals in relation to the inhabitants of all other longhouses. Whaling, in effect, provided the central organizational focus for a societal matrix that organized all individuals in traditional Makah villages.

In addition to providing the whalers with ceremonial privileges, and Makah society with a governing principle and a means to subsistence security, the Makah populace received other benefits from whale hunts. These benefits included, but were not limited to the following:

1. Whale products such as blubber and oil proved an important source of trade goods. The Makahs served as the middlemen in a huge trade network. Because of their geographical advantage, Makahs controlled a critical position in a network which functioned north and south along the Pacific Coast, as well as from the Pacific Coast to the Puget Sound (Swan 1870, Renker and Gunther 1990, Renker 1994). Whale products insured that the Makah people enjoyed a high standard of living with diversified interests (Huelsbeck 1988).

2. Whale products provided a substantial food resource for the Makah people. Early archaeological studies indicate that as much as 84.6% of the Makah pre-contact diet could have been composed of whale meat, oil and other food products (Huelsbeck 1983:43). Recent collaborative efforts between Dr. Huelsbeck and marine biologists have resulted in an adjustment to this early statistic. The projected size of the gray whales found at the Ozette site was too conservative; the mammals could easily have provided 100% of the food for the Makah Tribe (Huelsbeck 1995: personal communication). Clearly, whale products fulfilled important subsistence functions. In addition to nutrition, 25% of bone tools found at Ozette were made from whalebone.

3. The skills needed to hunt whales on the open ocean easily transferred to other Makah offshore activities, including deep water and interceptive fisheries and seal hunting. These pursuits provided additional sources of trade items and food.

4. Ceremonies needed to prepare whalers and their respective families for the hunt provided the Makah culture with a social framework that contributed to governmental, social, and spiritual stability.

The four cultural points articulated here have corollaries in the modern world.

In relation to trade, the Makah Tribe signed an agreement with the United States Government restricting the sale of whale products generated from whales harvested under the IWC quota. This agreement does not restrict Makahs from utilizing the subsistence-based redistribution networks that already existed within the reservation. Data clearly indicate the presence of localized networks that aid in the redistribution of whale products, particularly to family members who were not adept at processing and preparing whale themselves (Renker 1988, Sepez 2001, Renker 2002, Renker 2007).

Whale products have become a significant food resource for modern Makahs, in spite of the fact that only one whale has so far been successfully hunted during the first IWC quota period. In fact, a drift whale that washed ashore in an isolated part of Makah territory was butchered and distributed to over 100 Makah households during the summer of 2001. This event is significant because the increasing Makah demand for whale products motivated more Makahs to utilize the drift whale, and transport the meat,

blubber, bone, and other parts to Neah Bay by boat. Since the whale was located on a remote beach with no road access, a small fleet of boats ferried whale parts from the beach to the boats, then back to Makah households.

When available, Makahs are utilizing whale food products such as meat, blubber, and oil rendered from blubber as well as other whale parts not as well known to non-Makahs: eyes, brain, heart, cheeks (the Makah reference to the jaw muscles and the fleshy area under the eyes), and the like. Modern Makahs have quickly rediscovered their ancestral appetite for whale products: 67.1% of surveyed households would like whale oil on a regular basis, 71.7% would like whale meat on a regular basis, and 47.4% would like blubber on a regular basis (Renker 2007). Numerous survey respondents indicated a preference for sea mammal products citing both traditional and health reasons (2007). This datum replicated the findings in the 2001 Household Whaling Survey.

The significance of the whale as a food resource was also apparent when examining the variety of preparation methods in use on the Makah reservation after the 1999 hunt. One might expect a paucity of recipes and techniques for preparing whale meat and blubber, given a seventy-year gap in actuality. Instead, respondents provide the following data. Of the 61.3% of the respondents, who received whale meat from the 1999 whale, 41.5% cooked stew, 35.4% grilled steaks, and 34.1% smoked meat. 19.5% of respondents also indicated preparation methods other than those offered by the survey. These innovative methods included stir frying, kippering, deep frying, barbecuing, and boiling. Two respondents made whale burgers, and one created whale sausage. Of the remaining respondents who did not receive whale meat for their personal consumption, 84.7% indicated that they would have liked meat from the 1999 whale (Renker 2002).

The Household Whaling Survey I found that of the 75.3% of respondents who prepared blubber, 22.4% smoked it, 37.9% rendered the blubber into oil, 6.9% pickled it, 48.3% boiled it, and 65.5% ate the blubber raw. An additional 3.4% of respondents used the blubber for cosmetic purposes. Several interview respondents did indicate that rendering the blubber from the 1999 whale posed problems because of the low concentration of fat in the animal (Renker 2002). This response is interesting because a 2002 NOAA press release described living, stranded gray whales as being "very thin" during the years 1999 and 2000.

Whale oil is a particularly important commodity for the Makah people, and its precious nature increases its value. The rich oil is utilized in the same way many people use olive oil. In the Makah example, many people flavor dried or plain food, such as fish, fish eggs, potatoes, or bread, by dipping these foods into the whale oil. This traditional use is mentioned in the earliest ethnographies, such as Swan (1869) and Densmore (1939). In addition, whale oil may be used in particular ceremonial and ritual activities. In one example, when thrown onto a roaring fire in the middle of a longhouse, the whale oil causes the fire to blaze up in a most extraordinary manner; this effect looks the same to modern Makahs as it did to their ancestors, increasing the spiritual connection between past and present.

The Household Whaling Survey I (Renker 2002) attested to the significance of the whale as a food resource because of the large number of respondents who wanted additional information about processing and preparation techniques for whale products. Of 163 respondents, 70.6% wanted more information about preparing whale meat, 52.1% wanted to know more about butchering whale, 60.1% wanted information about rendering oil, and 59.5% wanted to know about smoking meat. After five years, the second Household Whaling Survey found the interest in the community had stayed constant. Of 152 respondents, 70.3% wanted more information about preparing whale meat, 56.6% wanted to know more about butchering whale, 59.2% wanted information about rendering oil, and 63.8% wanted to know about smoking meat (Renker 2007).

Modern Makahs also have an interest in whalebone as a raw material. 69.7% of current Makah households report that they would like to have access to whale bone on a regular basis, and 58.6% of households would like more information on the subject (Renker 2007). In the previous survey, some people indicated that they were disappointed that the bones of the 1999 whale were not made available to the community for private use. Instead, the Makah Tribal Council made an arrangement with Neah Bay High School, which provided vocational opportunities for high school students. The entire skeleton of the 1999 whale was given to the high school so that students would learn to clean and prepare the bones for reassembly and eventual display at the Makah Cultural and Research Center. The National Marine Fisheries Service, the Burke Museum of Natural History and Culture at the University of Washington, and the Denver Museum of Natural History were all additional participants in this ongoing project (Monette: personal communication: 2002). Some 40 Makah high school students learned valuable vocational skills

through participation in the skeletal assembly project. The skeleton of the 1999 whale was finally installed in the Makah Cultural and Research Center in November, 2005 (Pamplin 2005).

Most importantly, contemporary Makahs celebrate the ceremonial rigor and discipline that was so important to their ancestors. A comparison of the two household whaling surveys provides evidence attesting to this statement. 38.7% of respondents in the first Household Whaling Survey reported that they had actively participated in whaling ceremonial practices since the 1999 whale was harvested, and that 21.6% of their household members were also active ceremonial participants. (When respondents and household members were considered together, 28.3% of the study population reported engaging in whaling ceremonial practices.) These figures were meaningful, given the seventy-year hiatus in whale hunting, as well as the secretive atmosphere which surrounds these activities. The serious attention given to the ceremonial preparation requirements also acted as an indicator of the positive impact that the whale hunt had on the social and behavioral aspects of Makah life (Renker 2002).

Even more significant are the findings in the 2006 household survey regarding ceremonial practices and participation. In spite of the fact that legal issues had prevented the Tribe from whaling during the 2003-2007 Quota Period, 48.7% of respondents indicated that they now participate in ceremonial activities related to whaling, and that 38.0% of household members do the same. When considered together, 42.2% of respondents and their household members actively engage in whaling ceremonial activities, a 25% increase over the figure reported in the 2001 survey. Table 1 illustrates the growth in ceremonial participation in the past five years (Renker 2007).

Table 1 - Growth in Ceremonial Participation

	(2002)	(2007)	+/-
# respondents	159	152	n/a
# household members	268	234	n/a
Respondents who practice whaling ceremonies	63 (39.6%)	74 (48.7%)	+14.9%
Household members who practice whaling ceremonies	58 (21.6%)	89 (38.0%)	+34.8%
Total study population who practices whaling ceremonies	121 (28.3%)	163 (42.2%)	+25.8%

Table 1 illustrates the fact that Makah participation in whaling ceremonial activities has increased over a five year period, in spite of the fact that no actual whale hunt has taken place. This resurgence of ceremonial participation is profound, and demonstrates the positive effect that the successful 1999 hunt had, and continues to have, on the Makah community. The growth also provides evidence that families continue to teach the spiritual connection between whaling and ceremonial responsibilities, and continue to maintain a metaphysical state of readiness, in spite of an atmosphere of legal delay.

One example of a ceremonial practice (that can be discussed publicly) shows an important link between husbands and wives involved in the whale hunt in addition to a connection of past and present. Early ethnographies (Swan 1869, Densmore 1939) as well as recent depictions of pre-contact life (Parker-Pascua 1991) mention the practice followed by whalers' wives of "laying still" with their backs to the ocean while their husbands were hunting whale. By following this practice, wives would spiritually connect with the whale in the ocean, causing it to

"be still" on the water, and to swim toward, rather than away, from shore. In the successful 1999 hunt, wives, partners, and mothers of the crew followed this ceremonial practice, and two of these women were brought onto Front Beach in the ritual manner when the whale was brought ashore.

In order to strengthen the skin and cleanse the heart and mind, men continue to practice ceremonial preparations like bathing. These activities, and others, have religious significance and are necessary for a successful hunt. As in pre-contact and historic times, whalers keep their personal preparations highly secret.

A Diachronic Account of Makah Whaling

The Ozette archaeological literature, especially the work of Huelsbeck (1983, 1988, 1988a, 1988b), attests to the considerable time depth and continuity of the Makah whale hunt. Prior to contact with non-Indians, the Makahs and their **nu·ca·nu·** = relatives hunted whale successfully for at least 1200 years without destroying the resource. Ceremonial, social and cultural proscriptions established a functional balance between the Makahs and the whale populations which swam in or through Makah waters.

Once non-Indian traders and explorers entered the waters of the Pacific Northwest, Makah whale hunters felt the effects of an increasing demand for whale products. In response, Makahs continued to ply their well-established trade in whale oil and whale products with the visitors.

The regularity and size of the gray whale migration attracted whalers from the United States and Europe. Like the Makahs, other non-Indian whale hunters appreciated the opportunity to practice offshore whaling in the area, as opposed to the more expensive, more protracted, multi-year ocean voyages. "As the market for whale oil and dogfish oil increased in the 1840s and 1850s, the Makah brought oil for sale . . . Oil purchased from the Indians was a major export of the Hudson's Bay Company" (Lane 1955:17). By 1852, Makahs were trading or selling some 20,000 gallons of whale and fish oil (Lane 1955:18); this figure would rise to 30,000 gallons per annum within 20 years (Gibbs 1877:175).

In 1854, Capt. Charles M. Scammon discovered the breeding grounds of the gray whale in the lagoons of Baja California and Mexico (Hagelund 1987:42-43); this discovery now provided the

two terminal points for the gray whale trek, and helped to increase the exploitation of the gray whale on the American Pacific coast.

As time passed and contact with non-Indians increased, other entities intruded into Makah life, and by extension, into the whale hunting complex. Governor Stevens, assigned by the United States' government to negotiate a Treaty with the Makah in 1855, knew of the commercial value of Makah whale hunting talents when the Treaty of Neah Bay was signed. Indeed, numerous Makahs made speeches during the Treaty negotiations asking that the right to whale be reserved to them when the Treaty was signed. These Makah negotiators, and Gov. Stevens, agreed that Article IV of the Treaty of Neah Bay would specifically list whaling, along with sealing and taking fish, as a right guaranteed to the Makah Tribe. Article IV of the Treaty of Neah Bay makes Makahs unique among all United States native tribes: Makah is the only tribe that signed a treaty with the government of the United States explicitly recognizing and protecting the right to hunt whales.

While the Treaty of Neah Bay preserved the Makah right to hunt whales and seals, and to fish in usual and accustomed grounds, other federal interactions with the Makah did not seem to support this language in actuality. Assistance sent to the Makahs contained agricultural tools, rather than items which supported any of the active components of the Makahs' maritime lifestyle. Instead of tools and materials which would help to procure, process, or preserve whale, seal or fish products, Makahs received pitchforks, scythes, hoes, and sickles. "James Swan reported in 1862 that the Makahs had converted the tines of pitchforks into fishhooks, scythes into blubber knives, and sickles into arrowheads" (Marr 1987:29). The Makah reaction to the agricultural materials is perfectly understandable given their splendid maritime talents and the fact that Makah land was obviously unsuited to cultivation (Whitner 1977, Renker and Gunther 1990).

Rather, the motives of the United States are suspect. While soil studies may have been unsophisticated in the mid-nineteenth century in the Pacific Northwest, it took little effort to realize that the soil, vegetation, and topography of the coastal area was unlike the rich agricultural belts in other parts of the country, such as the Plains and the Northeast. Indeed, the land on the Makah reservation was clearly different from that of the Washington territory east of the Cascade Mountains.

This bizarre situation developed because of prevailing ideas regarding federal Indian policy; it had been developed with a very different perspective. The United States government did not want to encourage self-sufficiency, because self-sufficiency often encouraged hunters and gatherers to travel beyond the confines of the established reservations, and to maintain cultural practices considered savage and barbarous. The best way to force a sedentary existence on a group of hunters and gatherers was to make the group dependent upon agriculture, which required a fixed resource base. The singular nature of this policy was also inappropriate for the Makahs, who already had a fixed, plentiful marine resource base and no land suitable for agriculture.

A philosophical mandate accompanied this strategy. "One of the convictions of those associated with the administration of Indian affairs, both officially and informally, was that farming was associated with civilization" (Whitner 1977:21). In the Makah case, Indian policy was designed "to change the Makahs from self-sufficient food gatherers to farmers, dependent on the white people for tools and instruction" (Marr 1987:29). Indian policy was also designed to assimilate Makah people through an educational system that ignored Makah priorities and prohibited the use of the language, in addition to eradicating customs considered heathen, savage, and dangerous (Colson 1953, Gillis 1974, Whitner 1977, Renker and Gunther 1990).

Whitner (1977) reports that Indian Agency personnel were somewhat daunted by the task of civilizing the Makahs, and cites Henry A. Webster, the first resident Indian agent, as writing in 1866, "The Makah are probably nearer the normal state of savage wilderness than any other tribe in the Territory, and seem particularly averse to acquiring the habits and customs of the whites" (in Whitner 1977:20). Little progress is recorded in Webster's Annual Report for 1867, though he is staunch in his resolve to eradicate traditional values and practices:

Their very natures must, however, be changed, and their habits forced, if necessary upon them, or they will retrograde into worse than savage supremacy of filth and disease of former days (ARCIA 1867).

In spite of the Treaty's recognition of whale hunting as an important facet of Makah life, the United States government chose not to support this well-developed practice. Lane (1974) discusses the frustration of several resident Indian agents who realized that federal efforts should be promoting marine

activities, rather than agriculture. Some agents believed that assimilating Makahs to American values, customs, and practices would be easier if the government aided traditional marine pursuits.

Lane documents numerous requests for support of fishing activities from 1860-1881 from agents and superintendents. Regardless of the nature of these requests, Lane concludes, "the United States failed to provide the assistance repeatedly requested" (1974:20). Gillis (1974), Lane (1974), Whitner (1977), and Marr (1987) discuss the circumstances surrounding the federal government's promotion of a shift in Makah subsistence from a maritime base to an agricultural one.

In 1870, President Grant's annual message announced an Indian policy which sought to "Christianize and civilize the Indian" (Whitner 1977:18). At this same time, Pacific whale populations were diminishing, and the Makahs who continued to whale hunt had to make adjustments. Singh (1956) and Van Arsdell (1987) indicate that Makahs increased their seal hunting efforts to compensate for a less profitable whale hunt. "Beginning in 1886, Makah crews were hired on sloops and schooners to hunt fur seal off the Washington coast and Vancouver Island (Marr 1987:29). Makah fur seal hunters easily demonstrated their pelagic talents and Makahs quickly used financial profits and exceptional skill to their advantage. Colson (1953:159) reports that "several Makah sealers had their own schooners and were hiring White navigators in the 1890s".

These changes greatly affected traditional subsistence and trading practices. Swan (1884-1887, 2:396) and Waterman (1920:48) both express opinions that the success of Makah fur sealing had an impact on the whale hunt. "This work was so profitable that the Makah temporarily abandoned whale hunting" (Renker and Gunther 1990: 428). Other historians agree. "By 1891, sealing became so lucrative for the Makah and West coast native hunters that their traditional whaling expeditions virtually ceased" (Webb 1988:145). A friend of A.W. Smith lamented the decline of the whaling culture in a letter written on 29 November 1888, "Many of our old whalers at Neah Bay have died since we left" (AW Smith Papers).

While the Makah enjoyed the prosperity brought on by their pelagic success, the Pacific fur seal population was showing signs of stress by 1890. The population could not sustain itself in the face of an increasing number of sealers and the use of firearms. The Law of December 30, 1897, made fur sealing

illegal; the agent for the Neah Bay agency, Samuel Morse, was directed to enforce this law on the Makah reservation (AW Smith Papers). Accordingly, Makahs would now be allowed to hunt fur seal only from canoes, using traditional gear and techniques. "Some returned to traditional whaling" (Renker and Gunther 1990:428), but the loss of cash from the commercial fur seal hunt created a huge vacuum on the reservation.

While whale hunts were "still the symbolic heart of the culture" (Marr 1987:25), they continued to diminish in frequency, and became less and less cost-effective. In addition, the introduction of American values worked against the traditional subsistence pursuit. For example, the American philosophy of social equality made it difficult for Makahs to continue to staff and organize whaling canoes, and therefore households, according to the ancestral patterns. Whale hunting was no longer the sole avenue to a position of ceremonial and political importance as the headman of a large longhouse.

Epidemics, bans on ceremonial activities, and the federal schooling system also produced devastating effects on the Makah's ability to resume whale hunting after the fur sealing ban. The diseases that affected the Makah population had reduced the number of tribal members by some 75% by 1890 (Boyd 1990:145); much family-owned information was lost as a result. Makahs died without passing down important knowledge. Hancock describes the rapid and disastrous effects of the smallpox epidemic of 1853 in his journal. This epidemic was so severe, it literally wiped the village of **bi?id?a** from the face of the earth.

It was truly shocking to witness the ravages of this disease here at Neah (sic) Bay... In a few weeks from the introduction of the disease, hundreds of natives became victim to it, the beach for a distance of eight miles was literally strewn with the dead bodies of these people, presenting a most disgusting spectacle (182).

The extreme number of fatalities caused by the epidemics also disrupted the line of authority in most families. Cultural protocol dictated that ownership of ceremonial and economic rights and privileges had to be transmitted publicly at a potlatch. In many cases, epidemics took the lives of people who had not transmitted control over ceremonial and economic privileges to another person. In many other cases, knowledge of critical components of rituals and ceremonies was abruptly lost.

The complicated social structure and ritual life which had existed prior to contact was severely disrupted by the decimation of the Makah population.

The governmental ban on traditional and ceremonial activities added to the social and cultural disruption. Potlatches were illegal by the 1870s (Marr 1987:50), forcing Makahs to move off the reservation or to inaccessible places to hold these important public events. Daniel Dorchester, Superintendent of the Indian Service wrote the following about Agent McGlinn, stationed on the Makah Reservation in 1890:

This is one of the best officers I have seen in the Indian Service. He knows the Indians remarkably well, understands his business thoroughly, and sticks closely to it. He strictly enforces the regulations of the Department, is breaking up old Indian customs, marries the Indians in due forms and records the marriage, and is very strict against intemperance and licentiousness. The Indians are quite industrious in their way, though rather spasmodic in their labors. They have seasons for berrying, hunting and fishing, and are as dirty and squalid as all fish Indians are. They earn a great deal of money, but have a potlatch system, in which they give away a large amount of money and other articles in feasts . . . Agent McGlinn is breaking up this custom (ARCIA 1890).

Without the potlatch, the Makahs could not establish important proprietary rights regarding ownership of dances, songs, and other ceremonial and economic privileges. Public transmission of these and other important events for the oral history record could not take place causing an additional level of social and cultural disruption.

Secret societies were also banned. These complex organizations carried important social functions prior to federal interference. Some secret societies were responsible for healing the sick, while others were important for maintaining social order and punishing transgressors (Ernst 1952). Regardless of the internal function that secret societies served for Makah society and culture, the federal government viewed these activities as savage and demoralizing (Whitner 1977, Marr 1987).

Dances and customs associated with secret societies and winter ceremonials fueled the federal opinion that boarding schools

were the only way to eradicate ancestral practices, which offended the American sense of morality and decorum. Agents realized that one way to assimilate Makahs and eradicate offensive rituals was to interrupt the transmission of ancestral information within what remained of Makah families. One way they achieved this objective was by separating Makah children from the influence of their family via the use of boarding school. Whitner (1977:28) quotes agent C.A. Huntington as writing, "If the purpose be to civilize these children of darkness, to take them from a barbarous life and put them into a civilized life, the more divorced from the house of their childhood the better".

The United States' policy of assimilation through education increased the socio-cultural confusion. In their attempts to "Kill the Indian but save the man", white educators forced Makah children to leave their families, abandon the Makah language, and adopt white ways of eating, dress, worship, and behavior. Many Makahs who underwent this cultural indoctrination began to feel that traditional activities and beliefs were barbaric, and worked to make their lives more like the non-Indian teachers and administrators who promised modern education, health care and facilities.

In addition to these internal socio-cultural factors, other factors prevented whale hunting from returning to its former prominence. The gray and humpback whale populations were being seriously depleted by non-Makah hunting practices. The population of gray whales was reduced by non-Makah commercial hunters, making offshore hunting in canoes more difficult. Since the Makah style of offshore whaling relied on the ability of land-based lookouts to spot whales which swam close to shore, a lack of these whales effectively decreased the viability of the Makah whale hunt. Only three recorded whale hunts took place during 1905 (AW Smith Papers).

Men could no longer rest assured that the whales would be plentiful, and that canoes at the ready would be called to a hunt by a lookout. In addition, the intensive investment required by a whaler and his crew had not changed; men still had to invest enormous amounts of time in ritual preparation as well as in the care and maintenance of the whaling canoe and other associated gear. Without the plentiful supply of whales which had always graced Makah territory, this intensive investment became too difficult to justify.

So, men turned to a more productive venture that would still make use of the navigation and seafaring skills that both whale and seal hunters needed and used. Fishing had become a more effective venture than whaling prior to the turn of the last century.

The Makahs catch a great many fish, which they ship three times a week to Seattle, where they have a good market for them. They have caught and shipped as high as 10,000 pounds of halibut in one day (ARCIA 1889).

However, offshore whaling in motorized boats was still of interest to American, Canadian, European and Asian parties. As late as 1909, a Seattle based company was considering the establishment of a commercial whaling station at Neah Bay (Webb 1988:177). Plans for the Neah Bay station were eventually abandoned.

After more than a thousand years as whale hunters, Makahs found themselves in a social, ecological and political climate that no longer favored this pursuit. The combined effects of massive epidemics, boarding schools, and government acculturation policies had drastically changed the delicate and complex social dynamic which had supported the traditional Makah whale hunt. The astounding success, then eradication, of the Makah commercial fur seal hunt contributed to this disruption as well. When these two factors are juxtaposed with severely diminishing gray and humpback populations, even subsistence whale hunts became a risky investment. The investment in the Makah whale hunt became even riskier as more Makahs shifted toward the very successful subsistence and commercial venture of ocean fishing.

In spite of these factors, the Makah desire to reinvigorate the whaling tradition never dissipated. Families passed on whaling stories, traditions, and secrets from generation to generation. Whaling designs and crests still decorated public buildings and private homes. Accounts of Makah whalers were read again and again. Whaling displays in the Makah Cultural and Research Center and other museums kept visual scenes in the heads and hearts of Makah people. By 1994, the gray whale population had rebounded to healthy levels; the people in Neah Bay eagerly awaited the opportunity to hunt gray whales again.

The Quota Period 1998-2002

By the time that the Makah Tribe was granted its first quota from the International Whaling Commission (IWC), "the People who

Live near the Rocks and the Seagulls" had been preparing for the revitalization of the gray whale hunt for decades. Makah people had never stopped educating their children about their respective familial whaling traditions. Makah children in the public school on the reservation experienced whaling curriculum every year as a part of the standard school curriculum, as well as through special cultural and linguistic initiatives sponsored by the school district, the Tribe, or any one of a number of funding sources. In fact, collaborative educational efforts through the Makah Cultural and Research Center, the Bilingual program of the Neah Bay School, and other private efforts, had provided whaling curriculum in the schools since the 1960s, with continuous efforts beginning in 1981. While non-Makahs perceived a large temporal gap in the whaling history of the Tribe, tribal members saw continuity. Many individuals were patiently waiting for the whaling traditions to be taken from storage and implemented in reality.

The Makah Tribe already had a history of successfully reviving cultural traditions. In the last two decades, the Makah Tribe had reinstituted numerous song, dance, and artistic traditions, and operated a program to restore the Makah language to spoken proficiency on the reservation. These positive accomplishments were due to the enthusiasm, dedication, and knowledge of Makah people and to the creation of the Makah Cultural and Research Center; this institution managed (and continues to manage) the cultural resources of the Makah Nation through research, documentation, exhibition and education.

The Makah Tribe created the Makah Cultural and Research Center (MCRC) in response to the massive archaeological collection generated by the Ozette excavation. While the original intent was to create a museum to house the pre-contact artifacts from Ozette, community opinions shaped the MCRC into a research and education complex that contains numerous exhibition galleries, a language restoration project, archival programs, and a series of educational and interpretive services (Renker and Arnold 1988).

The MCRC had been instrumental in the revival of many Makah traditions. The facility has acted to centralize and incorporate the resources of Tribal government, the Makah community, and other private and public sources to manage Makah cultural resources; many of the resources and traditions that were threatened prior to the creation of the MCRC are now healthy and growing. Consequently, the Makah Tribe had a successful record of bringing ancestral traditions from a dormant state into the active present. The Tribe was confident

that the resumption of whaling would be a success, and was not daunted by critics who believed that this tradition could not be reinstated.

On May 17, 1999, the Makah Tribe celebrated a pivotal moment in its long history. At 6:54 am, the Creator allowed a Makah crew to realize a collective dream that the Makah Nation had stored in its minds and hearts for seventy long years: they brought a whale home to the Tribe. This pivotal cultural event riveted the attention of the Makah community, and energized Makah Tribal members who believed in, and worked toward, the restoration of this significant cultural and subsistence practice.

Survey data from the Household Whaling Survey I (Renker 2002) indicate that some 1200 Makahs watched the climactic moment of the successful hunt on live television. Hundreds of Makahs traveled home to the reservation as soon as they could, wanting to be a part of this significant event. Later that day, some 1400 Makahs welcomed the whale to Front Beach in Neah Bay, and paid honor to the great creature. Many Makahs ate raw blubber right on the spot, and then began the task of preparing the food and resources that the whale contributed to the Makah people.

Butchering the whale proved a huge task for the Makah people. Lack of familiarity with gray whale anatomy, tools which were not well adapted for gray whale meat and blubber, and logistical issues presented immediate obstacles for the butchering process which began on Front Beach. Some confusion also centered on whale parts other than meat and blubber. Most importantly, Makah were able to overcome these problems and continue with the job of processing the whale.

In a matter of hours, a flatbed truck had taken what was left of the whale and driven to the Makah Tribe's fish plant, a processing plant with 800 cubic feet of freezer space and a service entrance large enough to allow the flatbed to drive inside. Within twenty-four hours, Front Beach showed no sign of the momentous event which had happened the previous day. The Makah butchering crew, which included Makahs who had traveled to Alaska to learn processing techniques, had some assistance from a Native Alaskan. Many people worked to butcher the parts of the whale which had not been distributed to Tribal members on the night of 17 May. In addition to meat and blubber, Makahs interviewed during the Makah HWS I reported requesting and receiving whale lice, sinew, baleen, brain, and heart. Other Makahs reported that they would have like to receive liver, cheeks, eyes, and intestines. Some of these items, like whale

lice and baleen, are primarily used for ceremonial reasons, while others can be used in tool production or as food. The bulk of the food products derived from the whale were reserved for the Tribe's celebratory feast, which was to be held on 22 May.

In private homes, people welcomed whale meat, blubber, and other whale parts. Between 17 May and 22 May, some households began to use recipes held in family confidence for decades, and others experimented with techniques used for other sea creatures, like seals and fish. Some 62.9% of Makah households received meat from this whale; 48.4% received blubber. A majority of households which did not receive meat or blubber from this whale reported that they would have welcomed whale products into their homes (Renker 2002).

On 22 May 1999, the Makah Tribe paid tribute to the whale which provided so much to the Tribe, and celebrated a new chapter in its cultural history. Thousands of people attended the parade held during the day, and the feast held in the high school gymnasium later that afternoon. In addition to the local Makahs who attended these events, many Makahs journeyed home to participate.

Unfortunately, this was the only successful hunt during the quota period 1998-2002. Restrictions on the areas in which Makahs could hunt gray whales, as well as limits on when the hunt could take place hampered efforts to take additional whales as provided by the quota. Further constraints arose from a lawsuit filed in 1997 October. This domestic legal issue halted all Makah whaling for the latter half of 2000 and all of 2001.

Lawsuits were not the only problem that the Makah Tribe faced during this quota period. Four Tribal members alleged that the majority of Makahs were not in favor of the resumption of whaling, and that the Makah Tribal Council had misrepresented the opinion of its people. Fueled by these rumors, anti-whaling advocates staged numerous demonstrations on and off the reservation, and garnered attention from the print and visual media. The protestors also limited the success of the Makah hunt by blocking canoes, scaring whales, and threatening Makah whalers. During the 1999 whaling season, many television spots and published reports contained inaccurate or partially correct information about the whale hunt and other Makah cultural practices, and included quotes from the anti-whaling Makahs who insisted that the majority of Tribal members did not want the Tribe to hunt whales. These people also accused Makahs of

wasting whale products, claiming that tribal members did not like, nor consume, whale products. Detractors pointed to an alleged incident when meat and blubber from a 1995 whale which had incidentally been caught in a fishing net, were wasted.

Despite these obstacles, more and more Makah men trained to be whale hunters. During the last hunting season prior to the 9 June 2000 court decision, several family-based whaling crews were preparing to hunt, and two family-based crews were granted a total of three permits to go hunting by the Makah Whaling Commission. While no crew brought a whale back to the village, the social benefits of each crew's diligent preparations positively affected dozens of families.

In addition, The Makah Tribal Council wanted to address the concerns of citizens who insisted that Makahs did not support whaling, and that whale products were being frivolously wasted. Clarifying and quantifying the sentiments of enrolled Tribal members was extremely important, so the Makah Tribal Council commissioned a household survey in December 2001. This survey, The Household Whaling Survey (now called the HWS I to distinguish it from the HWS II conducted in 2006 for this quota request), asked Makahs to report their opinions about the whale hunt, as well as levels of participation in whaling-related activities, including the preparation and consumption of whale products.

The results of the HWS I were both interesting and conclusive. Makahs overwhelmingly supported the Tribe's efforts to restore the whale hunt, and wanted to include whale food products in their diets again. More importantly, Neah Bay residents indicated their readiness to incorporate more traditional practices in their daily lives.

The principal results are summarized below:

1. 93.3% of respondents supported the Makah Tribe's quest to reinvigorate a gray whale hunt.
2. When asked what motivated this support, 46.1% cited Treaty Rights as the reason, 35.5% noted that food, better nutrition, or a traditional diet was the reason, and 36.2% felt that maintaining or restoring some aspect of cultural heritage or tradition was the most important reason. 20.4% indicated that moral or spiritual benefits, such as changed lifestyle, better discipline, or increased pride, should prompt the Makah Tribe to continue to whale.

3. Community support for, and interest in, the Makah whale hunt was also shown by reports of participation in the actual events surrounding the successful 1999 hunt. Of the 163 respondents, 78.5% were watching live television when the whale was taken, as were 67.2% of the respondents' household members. 81.6% of the 163 respondents were present at Front Beach in Neah Bay when the whale was brought ashore, as were 87.6% of their household members.

4. 80.4% of the 163 respondents reported attending the Makah Tribe's celebration in honor of the first successful whale hunt in seventy years. 78.6% of these respondents attended the parade early in the day of 22 May, and 95.4% attended the feast later that afternoon. These respondents indicated that 180 (67.2%) of their household members went to the parade, and 191 (71.3%) joined the crowds at the dinner.

5. Survey participants shared familial information about whaling ceremonies, preparation tips, recipes, and whale products that had never been reported in the Makah ethnographic literature. Thus, the survey results supported the contention that whaling was a dormant, but far from obsolete, cultural practice of the Makah Tribe.

The Quota Period 2003-2007

This period of time was a frustrating one for the Makah people. While more and more tribal members were making spiritual commitments to an ancestral system of metaphysics, and were anxious to incorporate whale products into their diets, this lifestyle was threatened by "a sweeping aggression against Indians in the region" (Marker 2006:1). Because many non-Indians could not accept the Makah perspective that whales could be sacred animals and food simultaneously, "death threats against the Makah and the racist tone of some protests" (Oldham 2003: 6) worried 11.1% of Makahs, who feared that the commitment to whale hunting would endanger their children (Renker 2007). And, while the Tribe was assuming its responsibilities to merge traditional management strategies with internationally accepted scientific principles, its Treaty rights were obfuscated by a series of legal rulings that placed bureaucratic hurdles between the Tribe and its traditions (Roghair 2005: 210).

In spite of complex legal requirements and an atmosphere that eschewed a true appreciation for and recognition of diversity,

the Makah Tribe persevered in its activities to properly manage the gray whale resource, and sustain its cultural connection to whale hunting. The next sections discuss these two issues during the 2003-2007 quota period, while the last segment in this section presents a summary of the Tribe's current legal considerations.

The Tribe's efforts to manage marine mammals, create supplementary cultural awareness about whaling, sustain traditional awareness about whaling, and fight for its Treaty right to whale, have placed a substantial financial burden on the Tribe. During the 2003-2007 Quota Period, the Makah Tribe has spent approximately \$675,000.00 of its own funds on these activities (Peterson 2007).

a. Marine Mammal Management Program

In September 2003, after working closely with federal agencies on marine mammal issues for over fifteen years, the Makah Tribe formally instituted a Marine Mammal Management Program (MMMP) and housed it within the Makah Fisheries Management Office. A full-time, permanent biologist with statistical skills and a working knowledge of population modeling was hired to monitor marine mammal populations within the Tribe's usual and accustomed areas (U&A), conduct research about these populations, and develop regulations regarding marine mammals that might be stranded in Makah territory or be caught as incidental bycatch in the Tribe's fisheries. One goal in this area was to "reduce incidental mortality of marine mammals . . . and look at ways to reduce harm to gear/catch by marine mammals (Pamplin 2003:3). Of particular interest to the Tribe's new program was the Eastern North Pacific stock of gray whales.

The MMMP served as a liaison between the Tribe and other agencies which had an interest in the marine mammals that lived in or migrated through the Makah U&A (Pamplin 2006). The Makah MMMP also provided educational lectures and opportunities for children, and sought to increase understanding of Makah whaling by giving lectures at conferences and symposia.

As for the Makah whaling effort, the MMMP biologist was charged with the responsibility of attending IWC meetings with the Tribal delegation, providing IWC Scientific Committees with Makah MMMP research findings, and participating in IWC Scientific Committee meetings, because "a goal of this program is to become familiar with the latest marine mammal research in the Pacific as well as the world" (Pamplin 2003:3).

Over the next three years, the Makah MMMP, due in large part to the expertise of biologist Nate Pamplin, helped the Makah Tribe to become a scientific partner in the management and conservation of gray whales. The following is a list of Makah MMMP highlights which occurred from 2003-2006:

1. For three years, the Makah MMMP participated in surveys to identify gray whales by visual observation as well as aerial photographs, and to collect and process biopsy samples for genetic research.
2. In 2003, the Makah MMMP scheduled and oversaw marksmanship training for the whaling crew, as well as secured a firearms safety expert to conduct tests on the equipment.
3. In 2004, the Makah MMMP began participating in the IWC Scientific Committee meetings, sending biologist Nate Pamplin to participate as a United States delegate. This scientific collaboration at the IWC meetings continued in 2005 and 2006.
4. In 2004, the Makah MMMP joined in a research project that documented and monitored contaminants in marine mammals collected in the U&A of the Makah Tribe.
5. In 2005, the Makah MMMP biologist was invited to join the Pacific Scientific Review Group, which advises federal agencies about marine mammal stock assessments and reviews mortality assessments.
6. In 2005, the Makah MMMP helped coordinate the final articulation of the whale skeleton from the 1999 hunt and assisted with its installation in the Makah Cultural and Research Center.
7. In 2005, the Makah MMMP organized and participated in a cultural/scientific exchange with the people of the Chukotka region of the Russian Federation. The Makah Tribe invested \$60,000 in this effort to exchange cultural and scientific information with the people who share their aboriginal and subsistence gray whale quota with the Tribe.
8. In 2005-2006, the MMMP, through the efforts of Nate Pamplin, researched the "stinky whale" issue, and co-authored a paper on the subject.

The creation of the Makah MMMP, and its extensive contributions to science, research, policy, and education regarding marine mammals, particularly gray whales, since 2003, clearly demonstrates that the Makah Tribe's primary interest in the gray whale is the understanding and conservation of the Eastern North Pacific (ENP) stock. The Tribe considers it imperative that the ENP gray whale population remains at or above its optimum sustainable population. As a whale hunting people, the Tribe is keenly aware of its obligation to insure a balance between its need to harvest a limited number of animals, and to actively invest in the health of the species as a whole.

b. Cultural Activities

Whaling is an integrated part of Makah life on the reservation. During the 2003-2007 Quota Period, most Makahs demonstrated their support for whaling efforts by simply going about their daily business on the reservation, and by following the complicated legal obstacles that prevented a hunt from taking place (73.3%) (Renker 2007). While the 2006 Household Whaling Survey revealed that private, whaling-related ceremonial activities are steadily increasing, it did not address the many public manifestations of whaling in daily Makah life.

Whales are everywhere on the reservation. They are the dominant art icon in Neah Bay and adorn T-shirts, jackets, jewelry, signage, and a good deal of the public art in the village, including images inside and outside the public school, as well as the Tribe's buildings. Makah children "doodle" whale images on their school papers and folders, and create serious artwork with whales, thunderbirds, and wolf masks for local art contests.

This connection between Makah children and the Tribe's whaling traditions is not a superficial one. Parents, grandparents, and other relatives sing Makah songs to infants, tell them family histories and stories, and bring them to potlatches and other native gatherings. If children do not learn any Makah language from their family members, this instruction begins in their preschool years and continues through high school. Lessons in the public school are not limited to terms for whales and whaling equipment in the Makah language; children learn about the Tribe's whaling practices, personalities involved in historic whaling activities, and in middle school and high school, learn about the Treaty right to whale as well as the IWC process and the Tribe's current legal complications. Field trips to the Makah Cultural and Research Center are common, and

several Makah high school students each year serve as interns or study advanced topics at the Tribe's cultural facility.

This relationship between the Tribe and the school was especially productive during 2005, the 150th anniversary of the signing of the Treaty of Neah Bay. In addition to celebrating the Treaty anniversary with a public potlatch of huge proportions, the Makah Tribal Council sponsored an essay contest for high school students. Students were challenged to write essays about the meaning of the Treaty, and to include the Tribe's current struggles to maintain the right to whale. Four students, one in each grade 9 through 12, were chosen as winners, and read their essays in front of an audience at a Tribal Symposium held in the state capital of Olympia. The Governor of the State of Washington, the Honorable Christine Gregoire, was so impressed by these students that each took a photo with her and received a personal letter from her as well.

Other whaling-related cultural/educational events involved Makahs who wanted to learn more about whaling techniques and processing whale products. During the quota period, two groups of Makahs traveled to Barrow, Alaska, to gather information which would make Makah hunting and processing efforts more efficient. A group of fourteen Makahs even traveled to the Chukotka region of the Russian Federation in October 2005, to attend an anthropological conference and perform Makah songs and dances. Chukotka natives traveled to Neah Bay twice to provide technical assistance in the development of whaling skills and to receive technical assistance from the Makah Cultural and Research Center (MCRC) in developing their own tribal museum and cultural center.

The MCRC provided an important educational bridge between the Tribe and the non-native population as well. One important event in the Tribe's efforts to motivate a better understanding of its whaling practices and culture was the 2005 November installation of the skeleton of the 1999 whale in the canoe gallery of the MCRC. For years, Makah high school students worked with museum and wildlife professionals to clean and articulate these bones, which were then ceremonially honored as they were moved to their location for eternity. The skeleton was installed above the whaling canoe in the gallery, so Makahs and visitors could appreciate the scale of the animal in relation to the hunting party. Fifty thousand visitors each year will now view, and honor, the whale that touched the hearts and souls of the Makah people in their first successful hunt in seven decades. Perhaps this type of display will help Makahs to counteract the lack of

understanding that surrounds their relationship with whales and their whaling efforts.

Unfortunately, without an active whale hunt, Makahs suffer. 79.6% of respondents in the 2006 Household Whaling Survey indicated that whaling provided positive benefits for the Tribe. For example, 48.0% of respondents expressed the opinion that when the Tribe was whaling, young people were involved with ceremonies and remained clean and sober instead of turning to drugs and alcohol. Current data from Neah Bay High School verifies that, in the absence of active whale hunting and its related preparations, one in five male high school students is currently using drugs and/or alcohol (Healthy Youth Survey 2004).

Many Makah Whaling Commission (MWC) representatives see this same pattern. These men represent their respective families on the Commission, and participate on the MWC because their opinions and perspectives are respected in the village. It is interesting to note that 7 of the 10 members who were asked to identify negative consequences which have arisen because of no active whale hunt mentioned drug and/or alcohol use among youth as a prime negative reaction. 2006 survey respondents echo this sentiment. 71.0% of respondents view the whale hunt as a means to maintain a healthy lifestyle for youth, as well as increase pride in being a Makah.

In addition, MWC members share the opinion that the ceremonies which must occur before a hunt, and the clean/sober lifestyle that hunters and their families must have, are a critical part of the Makah Tribe's spiritual profile. The moratorium on active hunting places Makah families at risk because important ceremonial practices cannot take place. These ceremonies have evolved over millennia, and shall not take place unless hunters are preparing for an actual hunt. Without an active hunt, MWC members fear that an important part of the ceremonial life that was restored during the active hunting period in the late 1990s will remain in jeopardy. This fact is especially urgent because so many Makahs reported that they practiced traditional ceremonies in the 2006 Household Whaling Survey.

The protracted legal battles that have delayed whaling have negatively affected the Makah Tribe in other ways as well. Makah Whaling Commission members point out that it is hard for Makah people to live under the stress of a concerted effort to derail a religious activity and an important aspect of tribal identity whose end product also provides a subsistence benefit. They

observed that the lack of whaling made it harder for Makah youth to find role models among whalers and removed an incentive for young men to focus on the physical and spiritual requirements necessary to a training regimen. MWC members could identify no positive effects of the whaling delay other than that it has displayed the Makahs' determination to protect and perpetuate the promises of the 1855 Treaty of Neah Bay. Members also expressed concern about the future of the treaty right and the role of the tribal and federal governments in protecting that right. The Commission itself has experienced reduced participation and lower morale because of the frustrations associated with the extensive delays in the bureaucratic process. They feel that a sovereign treaty right has been hijacked by a faceless administrative process.

Once again, Makahs feel as though they are facing a struggle to preserve an ancient tradition that is misinterpreted by the modern world. The Tribe had to deal with an active movement to eradicate its cultural and linguistic traditions from 1852 till 1934, and thought that those days of intolerance were over. Unfortunately, the Tribe is confronting a similar situation now, and this stress harms Tribal members, especially its children (Marker 2006).

c. Summary of Legal Impediments to Makah Whaling, 2002-2007

All of the Tribe's efforts to increase tolerance and understanding and make meaningful contributions to the scientific work of conserving gray whales did not alleviate complex domestic legal requirements that prevented the Tribe from whale hunting during this quota period. In spite of the fact that the Tribe delayed exercising its Treaty right until the gray whale population had returned to healthy numbers, and in spite of the fact that the Makah whale hunt is a manifestation of the spiritual connection between Makahs and their Creator, opponents of Makah whaling have tried to stop the hunt using a variety of legal mechanisms over the last decade.

Whale hunting opponents turned to the complex arena surrounding American environmental protection for the court decision *Anderson v. Evans* (371 F.3d 475 9th Circuit 2004), which halted Makah whaling during this quota period. *Anderson v. Evans* found that the National Oceanic and Atmospheric Administration (NOAA), a federal agency within the United States Department of Commerce, violated the National Environmental Policy Act (NEPA) by preparing an Environmental Assessment (EA), instead of the highest level of environmental review, an Environmental Impact

Statement (EIS), before it authorized the 2002 quota for the Makah whale hunt. In addition, the court decision also found that the Secretary of Commerce was required to waive the take prohibition of the Marine Mammal Protection Act (MMPA) before a Makah harvest of gray whales could take place. The Makah Tribe strongly disagreed with this court decision by the United States Court of Appeals for the Ninth Circuit. Nonetheless, in response to the procedural issues identified by the *Anderson* court, the Makah Tribe halted its hunting efforts to allow for NOAA to prepare an EIS for Makah whaling. The Tribe also began the administrative process of requesting an MMPA waiver from the Secretary of Commerce by submitting a waiver application to NOAA in February 2005.

NOAA began preparing the EIS when it received the MMPA waiver request from the Tribe. The preparation of an EIS is an involved process, often taking two or more years to complete. The process begins with a series of public meetings designed to solicit potential issues which need to be addressed in the statement. These meetings occurred in October 2005.

NOAA is currently working on the first complete draft of the EIS. The initial proposed timeline projected that a draft EIS would be ready for public comment in December 2006. The final document was slated to be complete in August or September 2007. NOAA would then be able to determine whether Makah whaling posed an environmental problem, and make a preliminary decision about granting an MMPA waiver. Additional administrative proceedings on the waiver application would then follow. As of April 2007, the draft is not complete. Current projections for the completion of the draft EIS target late summer or fall 2007. The public comment period would then open, responses to comments would be developed, and a final document and decision could follow eight to ten months later, in the summer of 2008.

The Makah Reservation in 2007

The contemporary Makah Tribe lives on a 46.5 square mile reservation (Makah Planning Office 2005), which dominates the northwestern corner of the Olympic Peninsula of Washington State. Other reservation properties include two offshore islands, Tatoosh and Waadah, and a 740-acre parcel of land surrounding the Ozette village site. In addition to these land areas, Makah traditional cultural properties include water territories, like fishing banks, as well (Renker and Pascua 1989). At the time of the Treaty of Neah Bay, Makah traditional cultural properties extended to fishing banks and other ocean

grounds as much as 100 miles offshore into the Pacific Ocean. To the north, Makah fisherman accessed rich fishing grounds which are now in Canadian waters, such as Swiftshore and 40-Mile Bank. To the east, Makahs considered the Strait of Juan de Fuca to be at their disposal to Port Crescent. To the south, Makahs utilized the waters off of Cape Johnson, call **xacic'u?a** "deep hold" (Swindell 1941, Renker and Pascua 1989).

In 1855, the Tribe signed the Treaty of Neah Bay, which established the boundaries of the reservation but did not recognize the multiple village system. Men negotiating for the Tribe discussed the Makah relationship with the ocean; the Tribe considered the ocean to be territory more important than land. **c'aqa·wi7**, one of these Makah chiefs, articulated this point. "I want the sea. That is my country" (Gibbs 1855). The Indian Claims Commission estimates that "seventy-five to ninety percent of the Tribe's subsistence in 1855 came from the sea rather than land-based mammals or vegetation" (Makah Indian Tribe v. United States, 23 Ind. Cl. Comm. 165, 174 (1970)).

Subsequent expansion of the reservation boundaries to include villages other than Neah Bay occurred in 1872 and 1873 via three Executive Orders issued by the United States Government. The village Ozette was not added to the reservation. Rather, another Executive Order in 1893 created a separate Ozette Reservation to accommodate 64 Makahs who refused to move to Neah Bay (Renker 1994). Today, the Makah Tribal Council is the official governing body of both the Makah Reservation and the Ozette Reservation. The Tribe governs under the authority of the Makah Constitution, which was ratified by the Secretary of the Interior in 1937 after the Tribe voted to accept the terms of the Indian Reorganization Act in 1936 (Renker 1994).

The Makah Tribe calls itself **q*idicca?·tx**, "The People Who Live Near the Rocks and the Seagulls". The name Makah is an English version of the term used by a neighboring Tribe for the Makahs. The Makah Tribe's Planning Office documents 1228 Makahs living in 438 households on the current reservation. Another 1,161 Makahs live away from the reservation (Makah Planning Office 2005). Most reservation residents live in the reservation's single centralized village, Neah Bay, the location of the public school, post office, general store, health clinic, and other amenities. While Neah Bay is certainly the hub of reservation activity, a growing population and a housing shortage have encouraged Tribal members to live in more remote reservation locations. Two popular settlements outside Neah Bay are at the

sites of former ancestral villages, such as **wa?ac'** (Why-atch) and **c'u·yas** (Tsoo-yess).

In order to meet the needs of its people, The Makah Tribe has made an economic commitment to diversifying and expanding its traditional resources. With the help of the Ford Foundation, the Makahs undertook a multi-year Community-Based Forestry Initiative (CBFI) project. This program sought to augment the documentation of traditional uses for botanical species, and to develop strategies to maintain these resources while providing economic development and educational opportunities for Tribal members. As a result of this program, many Makah households learned to increase and upgrade their marketing efforts for valuable basket weaving skills and products. In addition, CBFI participants earned to participate in markets that craved wreaths and floral arrangements made from local Makah forestry species.

Increasing the shellfish resource is another focus of the Makah Tribe. The Makah Tribe is currently piloting a program to grow, sustain, and then harvest, geoduck clams. One of the Tribe's most respected marine scientists, Dr. Yongwen Gao, is conducting research that will govern this effort, and ensure that the Makah Tribe can participate successfully in this market. Part of Dr. Gao's research in this area will also benefit the efforts to understand why the dissolved oxygen level in the Hood Canal has been so low in recent years (Makah Fisheries Management 2006: 19).

The Tribe has also succeeded in diversifying its marine fisheries over the past decade, particularly in the development of its trawl and longline fisheries. Pacific whiting (hake) is a highly complex and economically viable midwater trawl fishery that was established through the Tribe's extensive efforts in the mid-1990s. The tribal harvest of this groundfish species is caught between May and December and is entirely processed either at-sea on a processing vessel or at a shore-based facility in Westport, Washington. The whiting fishery brings in between \$3.5 and \$4.5 million to the Reservation economy depending on the annual allocation. (Joner 2007)

The Tribe has also substantially developed the longline fishery for black cod (**bi.sa.wix**), or sablefish, since the mid-1990s. This fishery, based on an annual allocation of the Pacific Fishery Management Council (PFMC), is further divided among the coastal tribes. Along with other groundfish harvests, excluding

whiting, it has generated revenue ranging from \$3.4 to \$4.8 million annually in recent years. (Bryant 2007)

The Makah Tribe has also continued its longstanding leadership among Washington tribes in the halibut fishery, harvesting approximately two-thirds of the Tribal allocation from the International Pacific Halibut Commission over the past decade. (Joner 2007)

Despite these successes, fluctuations in the reservation's natural resources, commercial fishing, tourism, and sport fishing continue to present challenges to the Tribe's ability to ensure reliable incomes and subsistence sources for its members. The average unemployment rate on the reservation is approximately 51%, and fluctuates seasonally; almost 40% of Makah households on the reservation have incomes classified below the federal poverty level, and 59% of the housing units are considered to be substandard (Makah Planning Office 2005). The average household income on the reservation is approximately \$29,436 (Census 2000), compared with approximately \$43,367 in the rest of Clallam County (Clallam County Economic Development Council 2005).

Variations in tribal fisheries have an especially drastic effect on Makah families. 85.2% of Makah households have someone in the residence who fishes; 62.8% of these households consider fishing to be the major occupation in the home (Renker 1988). 50% of household income on the reservation is derived directly from commercial and recreational fisheries (Joner 2007).

The 1988 Makah Household Fishing Survey also uncovered another pattern of interest in the Makah community. Over 50% of the reservation households used traditional Makah foods at least once a week; these foods include fermented salmon eggs, smoked fish heads and backbones, halibut cheeks and gills, and dried fish (Renker 1988:8). 40.2% of Makah households ate fish a few times each week, and 66.7% ate fish at least once each week. These data demonstrated the community's preference for and reliance upon traditional, local, marine foods which are often not favored by the dominant American population.

Recent research available in Sepez (2001) demonstrates the reliability of the 1988 subsistence profile, and by extension, documents very little variation in the dominant role that fish have played in Makah households at the end of the 20th century. One striking datum compared the amount of fish consumed in Makah households with that of the average American household. The

annual per capita consumption of fin fish and shellfish for the average Makah is a staggering 126 pounds, some eight times the consumption rate for the average American. While fish comprises 55% of the Makah diet, it represents only 7% of the diet of the average American (Sepez 2001:84).

This Makah reliance on seafood products continues to be derived from both subsistence traditions and from the existence of strong, traditional redistributive and reciprocal networks. By way of explanation, the cash that fishing generates is only one economic manifestation of the value of fishing in the local economy. Another level of economy also operates within traditional reciprocal systems. Even households without a fisherman derive food, money or other goods from a fisherman who is a relative or a friend. Fish is a medium of exchange on the Makah reservation, and is also an indicator of a fisherman's regard for the individual to whom the fish is given. Indeed, people on the reservation rely on the Makah fleet for substantial contributions to community meals, community functions, and ceremonial feasts.

In the past decade, the Makah fishing fleet has transitioned from its traditional focus on salmon fisheries to capture a growing market for whiting and black cod. Unlike salmon and halibut, these two fish species have not been the dominant subsistence fish for the Tribe over the last 2,000 years. In addition, the entire whiting catch is sold to fish processors, so its value is exclusively for commercial sale rather than for subsistence use. Whiting also contains enzymes that make it very difficult to preserve. While some black cod is taken home by fisherman for consumption, this subsistence use is growing slowly, and its primary value is also for commercial processing. Since whiting and black cod are not commonly eaten on the reservation now and do not demonstrate the cultural history of salmon and halibut, these fish do not enter into the traditional reciprocal systems of exchange. Because they are valuable exclusively (whiting) and primarily (black cod) for sale to commercial processors, more Makah households receive fewer fish when Makah boats are fishing for these species rather than for salmon or halibut. In fact, the growth of these fisheries, especially black cod, has seen a corresponding reduction in the salmon harvest because the latter fishery is affected by numerous uncertainties - weather, fish availability, changing ocean conditions, and the low price of fish relative to the cost of fuel and gear.

Therefore, the social impact of an increasing black cod and whiting catch on Makah households is enormous when considering the critical role of reciprocal networks which developed to maximize salmon and halibut use on the reservation. Since 100% of the Makah households on the reservation engaged in some kind of reciprocal networks which involved salmon and halibut exchange, and 84.1% of households who smoked fish gave it to other family members, friends and community meals, a decrease in surplus salmon and halibut has left a void that cannot be filled by whiting and has not been met by black cod. Whale products will efficiently and effectively fill this gap, since 2001 and 2006 Household Whaling Survey data demonstrate that whale products fit easily into the traditional reciprocal systems still operating on the reservation, and can be well-preserved for future use.

Additional periodic ecological circumstances (red tides and oil spills) can also negatively affect subsistence households which rely on marine resources. These events can reduce the ability of Makahs to utilize shellfish resources as effectively as in the past. One ecological change significantly affecting the Tribe's shellfish resources was the introduction of non-native sea otters to the Cape Flattery area, as the Tribe's dive fishery for sea urchins has been seriously depleted due largely to depredation by otters. Once again, whale products could fill this void for households unable to harvest shellfish because of external forces.

Still other factors are affecting subsistence issues pertinent to the Makah Tribe. The Makah Tribe, like many other governmental agencies, cut its operating budget by 15% from the previous operating year (Peterson 2007). Cutbacks in food and financial support from public assistance programs affect families which are already economically stressed, increasing their need for subsistence resources.

Teenage pregnancies, high school drop-out rates, substance abuse problems, and an increasing juvenile crime rate indicate that the Makah community is one still in flux: the enormous social disruption caused by epidemics, boarding schools, and federal policy is still not over. Entire social, cultural, subsistence, and ceremonial institutions were repressed, eradicated, or decimated, and no structural equivalent was substituted.

Continuation of the Makah whale hunt provides the Makah Tribe with a reliable mechanism to repair the damage done to the social infrastructure during the years of forced assimilation.

Additional whale hunts bring important ceremonial obligations, because spiritual preparation is an obligation of the whaling crew members and their respective family members. Now that almost half of the Makah Tribe's members participate in ancient religious ceremonies, the lack of an active hunt makes it impossible for certain spiritual rituals to be performed. A spiritual void of this nature is devastating for Tribal members, and the connection between unhealthy social behaviors and the inability to practice traditional rituals is common in the writings of noted American Indian authors (Deloria 1973, Josephy 1982). There is far more at stake for the Makah Tribe than just subsistence benefits.

The 2006 Household Whaling Survey (HWS II)

The Makah Tribal Council commissioned a second Household Whaling Survey to assess community opinion about whaling, quantify the use of whale products and participation in ceremonial activities, and determine the effect that whaling has on the Makah community. In order to maintain reliability with the HWS I, the methodology remained the same with HWS II (See Appendix 3).

The HWS II tabulated surveys from 152 randomly-selected Makah households using a slightly modified version of the instrument used in HWS I. The HWS I instrument was modified slightly by eliminating the section which asked for information about respondent activities on and around the date of the successful whale hunt in 1999. One question, "Were you or another household member interviewed during the 2002 HWS?" was also added.

As per eligibility criteria, 100% of respondents were Makah. 48.0% were male, 50.7% were female. 63.8% of respondents indicated that they were not interviewed for the HWS I. 100% of respondents considered themselves to be active members of the Makah community.

65.8% of the respondents had other Makahs living in their households, which provided data about whaling activities and food choices for an additional 234 Makahs.

Once again, the responses to question 12, demonstrate that an overwhelming majority of respondents (88.8%) support the continuation of the Makah Tribe's efforts to hunt whales. While 7.2% of respondents indicated that they were unsure of whether these whaling efforts should continue, only 4.0% of respondents categorized their response to this question as a definite no.

These results are interesting in comparison to the 2001 results. While the population surveyed in 2001 was 95.6% supportive of whaling efforts, there is little change in those who are definite in their opposition to the whale hunt. 3.1% were opposed in the 2001 survey compared with 4.0% in the 2006 survey.

The shift in positive response has been to the "unsure" category, and is not accompanied by anecdotal evidence of a significant decrease in the support of the village. Question 13 gives respondents an opportunity to provide open-ended opinions to clarify their response. Unlike the 2001 survey, some respondents in the 2006 survey provided both positive and negative comments to these questions; responses were either positive or negative in the first survey. As a point of interest, the negative comments focused primarily on the amount of financial resources that the Makah Tribe is investing in the legal effort to continue whaling, not on environmental or ethical concerns about the practice of whaling. Other "unsure" respondents were concerned about the amount of racial animosity that Makahs suffered as a result of the last hunting effort, a feeling verified in Marker (2006), or that efforts to continue the whale hunt will affect fishing quotas and treaties.

79.6% of respondents provided positive support for the continuation of whaling efforts, and cited ceremonial needs (44.1%) and maintenance of Treaty Rights (40.2%) as the most important reasons to continue efforts to receive another quota. For those who provided opinions about why these efforts are a positive influence for the Makah Tribe, 41.5% of respondents offered the observation that the restoration of ancient ceremonies has been the most beneficial outcome. 27.4% cited tribal unity as the primary benefit of whaling and 38.5% thought the positive effect of whaling on youth was most important.

In terms of whale products, the Makah respondents indicate that 67.1% would like whale oil on a regular basis, and 71.7% would like whale meat. 69.7% of respondents want access to whale bone, and 47.4% would like whale blubber. 59.2% of respondents indicate that they would like more information about how to render oil from blubber, and would be more amenable to blubber if they know how to extract oil.

Survey respondents showed a strong interest in obtaining more information about preparing whale products. 70.4% wanted knowledge about how to cook whale meat, and 56.6% wanted butchering information as well. 63.8% requested information

about smoking whale meat, while 59.9% wanted to learn how to clean whale bone. The community is still eager to learn to use the whale resource completely when another hunt is successful.

Of all of the data from the HWS II that demonstrate community support of and interest in the continuation of the whaling effort, the most striking datum concerns ceremonial participation. Responses indicated that 25.8% more Makahs are participating in whaling-related ceremonial activities in 2006 than in 2001. This evidence is particularly powerful when combined with the view of 41.5% of the respondents who see ceremonial restoration and maintenance as the primary benefit of the whale hunt.

The HWS II attests that the ceremonial aspects of the Makah whale hunt are once again becoming a standard part of the life of a majority of Tribal members, even when the Tribe is prevented from hunting because of outside legal struggles.

III. WHALE HUNTING AND THE MAKAH TRIBE: THE NUTRITION COMPONENT

Prior to contact with Europeans, the Makah people used a wide variety of foods. Because of their location on the tip of the Olympic Peninsula, the Tribe was able to exploit land and sea animals, including elk, deer, bear, seal, and a diverse population of fish, shellfish, and other maritime species. In spite of this abundance, "whale meat and oil were among their principal foods" (Densmore 1939:13). Not only were these foods of high status, their role in the nutrition and ceremony of the Makah people cannot be underestimated.

Huelsbeck (1988a:1) estimates that the amount of whale meat, blubber, and oil represented in the faunal assemblage at Ozette indicates that a significant percentage of the food at Ozette could have come from cetaceans. Whale meat spoiled easily, especially when the process of towing a dead animal home took several days. This tendency reduced the importance of whale meat in the pre-contact and early historic diet. During these time periods, about 10% of the food Makah people derived from whales can be attributed to meat (1988a:10). Oil however, was not subject to spoilage, and could be kept indefinitely as long as it was rendered properly (Swan 1869).

This important food product was recovered from natural pockets of oil within individual whales, as well as extracted from whalebones and rendered from blubber. Ommanney (1971:55) estimates that some 50% of whalebone weight could be reduced to oil. Faunal remains from Ozette indicate that bones were hacked and gouged to allow oil to both drip from the bones and to be recovering through boiling (Fiskin 1980). Blubber was primarily used as a vehicle to recover oil. Approximately 65% of the weight of blubber is reduced to oil through a rendering process.

Oil was an important nutritional item for a variety of reasons. Elders report that whale oil was used as a dip with a variety of foods, including dried fish and herring eggs, as well as potatoes in historic times. Swan (1869) and Densmore (1939) corroborate these accounts. Since dried fish and herring eggs had been processed to remove all natural oils in order to extend their longevity, the addition of whale oil added taste and nutrients to the pre-contact and historic Makah diet.

Oil was also the only nutritional product which figured prominently in the ceremonial life of the Makah people. An oil potlatch, given when a whaler had an abundance of oil, demonstrated his generosity with this commodity and was a rare

and special occurrence. Whale oil was the only edible item which could be the focus of a special potlatch, complete with particularized songs and other ceremonial items (Densmore 1939).

While blubber's importance in both pre-contact and early historic times was clearly as a precursor to oil, "blubber was also eaten, usually cured first" (Densmore 1939:14). It was most popular when broiled next to a fire, and was the standard pacifier for babies, according to oral and ethnographic accounts.

For approximately 2,000 years, the Makah people relied on the nutritional products of the whale, and evolved as a biological population within this context. Archaeological data confirm the fact that Makah people were using whale as a food resource for some 750 years before the technique of hunting whale was developed (Wesson 1990). Faunal remains from a number of sites indicate that Makahs were butchering stranded or drift whales long before the technology to hunt the creatures evolved.

When circumstances prevented the procurement of whale products for subsistence, Makahs compensated by increasing their reliance on other subsistence foods. In spite of the changes that have affected the Makah people, subsistence foods are still an important part of reservation life. Makah hunters still procure land game like elk, deer, and bear to fill winter freezers and reduce cash expenditures (Sepez 2001). The resources of the sea and the intertidal zones are an important food source (Renker 1988), despite the decreasing abundance described previously.

Recent investigations focusing on the subsistence practices of the Makah Tribe in forest areas (Renker 1994) and the intertidal zone (1993) detailed a viable and thriving culture. Elders described the subsistence philosophy of the Makah people, and stressed the importance of teaching these values to younger people. Younger Makahs participating in these studies were familiar with these teachings, and practiced these subsistence rules when hunting or gathering food.

The most important subsistence strategy to the Makah people is the axiom, "Take only what you need." Makah elders emphasize this principle when the discussion centers on any type of hunting, gathering, or fishing activity (Renker 1993:14). Other common subsistence rules include: 1) choosing the procurement area so that the available biomass is not adversely affected by the amount one needs to harvest, 2) choosing the procurement area that limits the need to travel, and 3) choosing the food to

hunt or gather based on the seasons of the food in question; one tries to avoid disturbing reproductive cycles, for example. The continuity of these subsistence practices and values reinforces the social and cultural integrity of the Makah people and constantly reminds Tribal members of their intimate, and long standing, relationship with the environment.

These subsistence foods and practices are very important when considering the nutritional needs of contemporary Makah people. Modern research concentrating on the nutritional needs of an anthropologically defined population emphasizes "the interactions of genetics, physiological processes, population characteristics, and a wide variety of nutrition-related diseases" (Pelto 1989:x). Using these criteria, a discussion of the profile of the Makah community yields interesting results when the focus is the use of the whale as food.

Consider the following. American Indian people are generally considered to be one the unhealthiest populations living within the United States of America; this observation is especially true for natives living within the confines of a reservation. The infant mortality and life expectancy rate for reservation residents is the lowest of all American citizens (Indian Health Service 1995).

The diminished life expectancy on American Indian reservations is compounded by the fact that certain systemic illnesses linked to food and nutrition appear in statistically higher percentages among these populations. Diabetes, for example, is 234% more prevalent among American Indian people than in all other U.S. races (Indian Health Service 1995: 5). As a matter of fact, "American Indians have the highest rates of diabetes in the world" (National Institutes of Health 1996:26).

A statistic of this magnitude is especially intriguing when one considers the nutritional history of indigenous American Tribes, and their respective divergence from the food traditions which mark western populations. Prior to contact with Europeans, North American Tribal people consumed foods which were native to their respective environments. Natives of the Great Plains and the Pacific Northwest were hunters and gatherers who utilized the plant and animal species which lived in and migrated through their territories. Natives of the Southwest and the Northeast augmented nature's bounty by cultivating crops, most of which were not available in Europe. (It is interesting to note that Makah people did not utilize plant foods to a great degree (Gill 1983). Many still experience digestive problems with diets high

in fiber and cruciferous vegetables (Indian Health Service 1991).

When traditional Tribal life was disrupted by contact with non-Natives, food traditions were some of the first to be affected. By the time the Treaties called for the forced placement of Tribal people on reservations in the 1850s, very few Tribes could still practice the subsistence and nutritional patterns which had sustained their ancestors.

Hunting and gathering tribes were restricted because their ability to utilize former usual and accustomed resource areas was diminished; the reservation system made it possible for non-Native populations to acquire and control lands and waters once available to Tribes. Through Treaties, agricultural tribes lost valuable land capable of cultivation to non-Indian farmers, and were given less productive reservation land as compensation. Additional stresses on native food traditions appeared when the American westward expansion and growing commercial interests decimated food animals and wild plants once plentiful before contact.

No matter what the individual Tribal food tradition, professionals in the health and social science fields appear to agree that the introduction of western foods like refined sugar and flour, beef, and lard have had a dramatic negative effect on the health of American Tribal members in general. Many of these foods were distributed to reservation natives by the American government in the form of annuities and supplies. Specific studies have directly linked the introduction of western foods into the diet of Tribal entities to a variety of health problems (Hildes 1966:501, Keenleyside 1990:13, National Institutes of Health 1996, Dewailly, et al 2001, Dewailly, et al 2002).

American health organizations such as The National Institutes of Health (NIH), the National Institute of Diabetes and Digestive and Kidney Diseases, the Public Health Service, and the Department of Health and Human Services, are conducting research to try to determine why American Indian populations are subject to food related illnesses at a rate so much greater than the rest of the population. In many cases, reservation residents contract these illnesses at about half the age of Caucasians, according to the Indian Health Service (1995).

Nutritional studies are also actively investigating the link between genetics and the acquisition of nutrition-related illness. Newly termed nutrigenomics (Ordovas 2006), this field

investigates "relatively recent changes in diet (that) have upset this interaction with respect to the nutritional environment" (Ordovas 2006: 443S). The most famous of these studies focuses on the Pima Indians of Arizona, a group with a food tradition dating back some 2,000 years; their traditional diet and lifestyle were disrupted about 200 years ago, causing major social and nutritional changes. The high rates of diabetes and obesity in this Tribe prompted the National Institutes of Health and several other American health organizations to undertake a long-term study of this population.

Thirty years of concerted studies with the Pima people have demonstrated results applicable to other Tribal people in North America, including the Makah. Research indicates that discrete populations evolve a genetic code that is uniquely suited to a particular environment and its food resources. This genetic code regulates the biochemical processes in the body that produce enzymes, proteins, fatty acids, and thousands of other chemicals which function within the human body. Scientists developing the genetic map for the Pima people have already identified a number of genetic variations within this community that are different from those in the white population (National Institutes of Health 1996:6). These variations may explain why Pima people eating western foods are more prone to develop diabetes, obesity, and the long-term consequences of these health problems than other populations.

Like the Pima people, Makahs found their traditional pattern of food use interrupted by western contact about 200 years ago. The traditional diet rich in fish and marine mammal oils was gradually replaced by a western diet which considered beef, dairy products, and cereals to be the most nutritious. The whale products which once comprised a principal part of the diet were no longer available, and the whale oil which supplemented the preserved foods of the winter season was replaced by butter and margarine. A high proportion of lactose intolerance became apparent in the Makah community, a fact not surprising for a population with no previous historic or cultural link to cattle or dairy animals (National Institutes of Health 1996).

Given this perspective, certain Indian Health Service data became especially intriguing. For example, Indian people of the Northwest Coast have the highest rate of digestive illnesses of all American Indian people. Such illnesses comprise the leading cause of hospitalization for native people in this area. For northwest people, 16.5% of all hospitalizations pertained to digestive diseases, compared to the next highest rate of 12.3%

for Navajo people (Indian Health Service 1995). And, in terms of overall nutritional health, Makah and northwest people are at a potential genetic disadvantage because these populations evolved without a reliance on high fiber, low fat foods, like the Pimas.

Consequently, the reintroduction of whale products, especially whale oil, may produce dramatic results in the health of the Makah people. Current research documents the important role that essential fatty acids (EFAs), also termed n-3 polyunsaturated fatty acids (n-3 PUFAs), play in cardiovascular and metabolic health (Carpentier, et al 2006, Dewailly, et al 2002, Dewailly et al 2001). Carpentier, et al, credits an early study of Greenlandic Westcoast Eskimos (Bang, et al 1971) for initiating the relationship between n-3 PUFAs (like eicosapentaenoic acid, EPA, and docosahexaenoic acid, DHA) and improved health; the study specifically names marine mammal oil as a source of these important substances.

Epidemiological observations of the beneficial properties of n-3 PUFAs have been made in populations consuming large amounts of fatty fish and marine mammal oils (Carpentier, et al 2006:6).

Other researchers at the Center for Genetics, Nutrition, and Health in Washington, D.C. extend the benefits of n-3 fatty acids to include

anti-inflammatory, antithrombotic, antiarrhythmic, hypolipidemic, and vasodilatory properties. These beneficial effects of n-3 fatty acids have been shown in the secondary prevention of coronary heart disease, hypertension, type 2 diabetes, and in some patients with renal disease, rheumatoid arthritis, ulcerative colitis, Crohn disease, and chronic obstructive pulmonary disease (Simopoulos 1999:1).

There is no doubt that chemicals in marine mammal and fish oils support human health. Therefore, the inclusion of whale oil in the Makah diet has crucial implications for the health of the Makah community. This fact is not as surprising as it may seem

when one considers the historic western use of products like cod liver oil as an important nutritional supplement.

While it is interesting to note that general human health benefits from the inclusion of more n-3 PUFAs, or EFAs, in the diet, the Makah population appears to suffer more when these substances are missing from their nutritional options.

For example, the Washington Office of the Superintendent of Public Instruction (OSPI) details the fact that Makah children attending public school on the reservation exhibit Attention Deficit Disorder (ADD), Attention Deficit Hyperactivity Disorder (ADHD), reading disabilities, and dyslexia at a rate almost twice that of the rest of the population (2004). Clinical studies which focused on the correlation between EFAs and these conditions report that children receiving supplemental EFAs demonstrate significant improvement in the ability to pay attention and read effectively (Stevens, Zentall, et al: 1995; Stordy: 1995).

In addition, marine EFAs have been clinically demonstrated to improve conditions like rheumatoid arthritis (Belch, Amsell, Madho, Dowd, and Sturrock: 1988) and diabetic neuropathy (Keen, Payan, Waller, et al: 1993). Both conditions are prevalent in the Makah community and especially within descendants of whaling families.

Whale oil and whale products may be the answer to these problems within the Makah community, and may provide researchers with an analogous study situation to that within the Pima community. Marine fish like salmon are becoming scarcer within Makah households for a variety of reasons, which disrupts traditional systems of reciprocity (Renker 1988). Consequently, access to whale products would provide Makahs with a nutritional remedy to many community health problems.

Access to whale products can provide the Makah community with important nutritional opportunities that carry implications for non-Makahs. Like their Pima counterparts, Makahs may be able to augment knowledge about the relationship between genetic patterns, nutrition, and health, especially in the area of EFAs. Community members are ready to rise to this challenge and re-learn the techniques necessary to make the food from the whale a part of Makah life again.

This section is not intended to imply that we can scientifically elucidate all of the nutritional advantages of whale products,

especially oil, for the Makah Tribe. However, recent nutrigenomic studies provide some points of interest. Investigations of local populations with a demonstrable time depth indicate that regional genetic factors evolve in order to maximize the dynamic relationship between certain foods and the patterns in which these foods are consumed by subsistence populations (Ordovas 2006, Dewailly et al, 2002, Dewailly et al, 2001). Consequently, it is reasonable to assume that increasing the consumption of locally available foods consumed through the millennia could confer substantial health benefits.

Such is the case for whale products and the Makah Tribe. The food products of the gray whale and the ceremonies needed before, during, and after a hunt have sustained the Makah people for over 2,000 years, and will continue to do so when the hunt is fully restored. The spiritual preparations needed before a hunt can take place, and social benefits of the hunt (unification, clean and sober lifestyle, pride in identity) will help the Tribe to overcome the negative aspects of modern Makah life (drugs, alcohol, and domestic violence) as well as the last vestiges of the cultural suppression and social disruption that affected the Tribe during the assimilation period.

In addition, the availability of whale products will help to replace other subsistence resources which fluctuate in abundance. As traditional fish networks change, the availability of whale products will prevent people from having to spend precious cash to replace current subsistence foods.

The resumption of the whale hunt will provide more than subsistence foods for the body. It will provide spiritual subsistence to the soul of the Makah people.

APPENDIX 1

MAKAH ALPHABET

The Makah alphabet variation used in this document is a function of printer and software limitations. The Makah alphabet is a variation of the International Phonetic Alphabet, and is presented in Renker (1987). No capital letters are used in this alphabet.

The following substitutions are used:

- = IS EQUIVALENT TO A BARRED L
- 7 IS EQUIVALENT TO A BARRED LAMBDA
- * IS EQUIVALENT TO A RAISED W
- ' IS EQUIVALENT TO A GLOTTAL MARK
- ? IS EQUIVALENT TO A GLOTTAL STOP
- IS EQUIVALENT TO A LENGTH MARKER

APPENDIX 2

CONFIDENTIAL HOUSEHOLD WHALING SURVEY - Fall 2006

This survey is commissioned and sanctioned by the Makah Tribal Council, and is being administered by the Makah Cultural and Research Center. The data from this survey will be used in creating the new Needs Statement. This document will be a part of the United States' request to provide the Makah Tribe with another five-year quota to hunt gray whales; the request is made to the International Whaling Commission.

Your name and the information you provide are strictly confidential. No information you provide will be linked directly to you in the Needs Statement. In fact, the author of the Needs Statement will not even know who has answered these surveys.

The completed surveys will be sealed and place in the Archives of the Makah Cultural and Research Center. Access to these documents will be restricted by the Makah Tribal Council.

The respondent for this survey must be a Makah who is 21 years of age or more. For the purposes of this survey, a household member is considered to be any person that is residing in your house at the time of this interview. This survey is interested in your views about Makah whaling, as well as the views and activities of the Makah members of your household.

ABOUT YOU AND YOUR MAKAH HOUSEHOLD MEMBERS...

1. Are you Makah? Yes _____ No _____

Age _____ Gender _____

2. Do you have any Makahs living in your household? Yes _____ No _____

How many? _____

If yes, complete 2a. If no, skip to 3.

2a. List all Makahs by relationship, gender, and age.

3. Where were you born? _____
4. Do you attend Neah Bay community events? Yes ____ No ____
- 4a. If yes, please check all that apply.
- Sporting Events _____
- Community Dinners _____
- Potlatches _____
- Health Presentations _____
- Makah Days Events _____
- MTC Quarterly/Annual Meetings _____
- Neah Bay K-12 School Events _____
- Other (Please specify) _____
5. Were you (or another household member) interviewed for the 2002 household whaling survey?
- Yes _____ No _____ Don't know or remember _____

ABOUT YOUR MAKAH HOUSEHOLD AND OTHER WHALING ACTIVITIES...

6. Would you like to have whale oil in your household on a regular basis?
- Yes _____ No _____
7. Would you like to have whale meat in your household on a regular basis?
- Yes _____ No _____
8. Would you like to have whale blubber in your household on a regular basis?
- Yes _____ No _____
9. Would you like to have whale bone in your household on a regular basis?
- Yes _____ No _____

10. Please check all whaling activities that you have been involved in since the 1999 whale was caught.

Member of whaling crew _____

Member of Whaling Commission _____

Butchering whale _____

Cooking whale _____

Smoking whale _____

Rendering oil _____

Eating whale products _____

Redistributing whale products to other Makahs _____

Participating in whaling ceremonial activities _____

Carving whalebone _____

Member of whaling support crew _____

Other (Please specify.) _____

11. Please check all whaling activities that any HH members have been involved in since the 1999 whale was caught. Please specify for each household member.

	#1	#2	#3	#4	#5	#6
Member of whaling crew						
Member of Whaling Commission						
Butchering whale						
Cooking whale						
Smoking whale						
Rendering oil						
Eating whale products						
Redistributing whale products						

Participating in whaling ceremonial activities

Carving whalebone

Member of whaling support crew

Other (Please specify.)

ABOUT YOUR OPINIONS REGARDING WHALE HUNTING...

12. Should the Tribe continue to hunt whale? Yes ___ No ____

13. What are the reasons for your answer?

14. If you answered yes to 12, do you think whale hunting has been a positive thing for the Tribe? Yes _____ No _____

15. What are your reasons for this answer?

16. Would you like to have more access to whale products in the future?

Yes _____ No _____

If yes, go to 17. If no, go to 18.

17. Which whale products would you like more of in the future?

raw meat _____

meat cooked or preserved by someone else _____

raw blubber _____

whale oil _____

bone _____

other (specify) _____

18. Would you like more information about any of the following?
Check all that apply.

Whale hunting _____

Cooking whale meat _____

Butchering whale _____

Rendering oil _____

Smoking meat _____

Cleaning whalebone _____

Carving whalebone _____

Other (Specify) _____

19. Have you been following the legal issues that surround Makah whaling since the last quota was granted in 2002?

Yes _____ No _____

20. Are there any other comments you would like to make?

APPENDIX 3

MAKAH HOUSEHOLD WHALING SURVEY METHODOLOGY

The survey was administered by the Makah Cultural and Research Center, an institution with twenty-six years of experience conducting household surveys on the Makah Reservation. The author of the instrument conducted numerous household surveys in the Makah community over the last twenty-six years; each of these surveys employed the same methodology. Results were tabulated and analyzed by the developer of the survey instrument.

In order to conduct the most accurate survey possible, the Household Whaling Survey II (HWS II) is based on the following:

Names of potential households to be surveyed were drawn randomly from the Makah Tribe's Turkey Distribution List. This list contains all households on the reservation in which at least one enrolled Makah resides. 34.7% of the Tribe's 438 Makah households (152 households) were interviewed.

All surveys were conducted in person by an enrolled Makah trained in proper survey procedures. The surveyor insured all respondents that confidentiality would be protected.

The survey contacted 183 of the Tribe's 438 households. Twelve surveys were not completed, eight of these contacts declined to be surveyed, six had moved away from the reservation, two had health issues that prevented an interview, one had moved into another household, and one was now a household with no Makah members. During the tabulation process, one more survey did not meet eligibility criteria and was removed from the tabulation. The final number of surveys tallied was 152. Percentages were tallied with a standard number of 152 respondents, except where survey stipulations directed differently. For example, if a question called for only those respondents who replied "yes" to question to answer the next question, the base number would change to the number of respondents directed by the instrument.

All survey respondents had to be enrolled Makahs with a reservation household; all respondents also had to be twenty-one years of age or older. Survey methodology assumes that each respondent is capable of answering questions about his/her own ideas and activities regarding whaling, as well as the activities of his/her household members regarding whaling.

A master list related each chosen household to an exclusive number; this master list was kept at the Makah Cultural and Research Center to avoid duplication and protect confidentiality. The actual surveys were conducted from November 21 - December 24, 2006. Surveyors returned completed surveys to the Makah Cultural and Research Center, which maintained security for the documents. All completed surveys are archived at the Makah Cultural and Research Center.

The author/tabulator did not know the names of the respondents, and related to surveys by number only.

Certain questions allowed for multiple responses. Others did not. In addition, certain questions only allowed respondents who had answered a previous question a particular way to answer. Incidents of both types are indicated on the survey instrument, which is appended in 2. On the tabulation sheet, the base number of respondents is indicated by R= . R=152 means that the percentage is calculated based on the answers of 152 respondents.

Internal checks and balances were placed in the instrument to encourage data validity.

Answers are reported as percentages calculated from the base number of respondents appropriate to each question. Percentages are rounded to the nearest hundredth.

One question and its set of responses posed a slight puzzle for the tabulator, and needs to be explained here. When faced with question number 4., "Do you attend Neah Bay community events?", the tabulator noticed a disconnect between the responses to this question and question number 4a. "If yes, please check all that apply." In 34 surveys, (22.37%) neither Yes nor No was checked in question 4, but one or more types of events was checked in 4a. In zero cases was No checked in question 4, and events checked in 4a. Consequently, responses for this question were tabulated as follows:

1. If Yes was checked in question 4, Yes was tabulated in question 4 and events in 4a. were tabulated.
2. If No was checked in question 4, No was tabulated in question 4 and 4a was skipped as per survey direction.
3. If neither Yes or No was checked in question 4, the response was coded as No Answer, and events in 4a. were tabulated.

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