Whale Hunting and the Makah Tribe: A Needs Statement

Ann M. Renker, Ph.D.
May 2012

Table of Contents

Whale Hunting and the Makah Tribe

I. EXECUTIVE SUMMARY

This document presents information pertinent to the continuation of the Makah subsistence whale hunt in two parts: a cultural component and a nutritional component.

The cultural component contains seven sections. The first section, **Cultural Abstract**, briefly discusses the anthropological framework that surrounds Makah culture and language. The second section, **The Whaling Culture of the Makah Tribe**, describes in detail the prominent place that whaling has always occupied for the Makah people. The third section, **Makah Whaling: Pre-Contact through the Present Day**, discusses Makah whaling through time.

The remaining sections in the cultural component address modern Makah whaling efforts and activities. The fourth section, **The First Gray Whale Quota Period (1998-2002)**, describes the IWC quota that enabled the Tribe to conduct its successful 1999 hunt. It also summarizes the results of the first Household Whaling Survey, which was conducted in December 2001 to understand the opinions of Makah tribal members about the whale hunt and whaling-related activities.

The fifth section, **Makah Whaling 2003-Present**, describes the Tribe's whaling activities since the first quota period. This section contains three sub-parts which discuss (1) the Tribe's management and research activities pertaining to gray whales and other marine mammals, (2) the continuation of whaling-related cultural activities within the Makah community, and (3) the domestic legal impediments that have kept the Tribe from hunting gray whales despite the IWC's approval of quotas for 2003-2007 and 2008-2012.[1]

The sixth section, **The Makah Reservation in 2012**, provides up-to-date information on the Makah Reservation's demographics, subsistence resources and other information pertinent to understanding the Tribe's continuing need to hunt whales in 2012.

The cultural component concludes with a seventh section, **The 2011 Household Whaling Survey (HWS III)**, which describes the

[1] The Tribe's marine mammal biologist and the Tribe's attorneys assisted in the preparation of two parts in this section: **Marine Mammal Management Program** and **Summary of Legal Impediments to Makah Whaling, 2002-2012.**

results from the third Makah Household Whaling Survey (Renker 2011). The Tribe specifically commissioned this survey so that current, objective information about the Makah community's sentiments regarding the whale hunt and whaling-related activities would be available for this Needs Statement. The survey was used to generate a quantified opinion profile about whaling within the Makah community, which is analyzed in the seventh section of the cultural component.

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 termed nutrigenomics (Ordovas 2006, Kaput, et al. 2007). This component also presents seminal, long-term research conducted by the U.S. 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 such as diabetes (DeMouy 2002). Most specifically, the nutritional 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, this component shows that 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 and Bang Ho 1979, Parkinson et al. 1994, Dewailly et al. 2001) is also included. Such a revival would be easily integrated into the Makah Health and Wellness Center programs, as has the reintroduction of other traditional Makah foods and medicines.

When considered as a whole, this Needs Statement demonstrates the following points:

1) Makahs have hunted whales for subsistence purposes for at least 1,500 years before the present day. Documented Makah subsistence use of whale products extends back another 750 years, to at least 2,250 years before the present day[2], during a period in which Makahs used drift and stranded whales before developing hunting technology. The historic, ethnographic and archaeological record conclusively demonstrates that whale

[2] Archaeological research continues in this area. Recent excavations suggest that Makah subsistence use of whales began earlier than this timeframe (Wessen 2012).

products formed a central – and likely the dominant – component of Makahs' traditional diet for over two thousand years.

Makah whale hunting was disrupted in the late 19th and early 20th centuries by the devastating effects of European diseases, forced assimilation, and the near extermination of gray, humpback and other whales by non-Native commercial whalers. This led to a suspension of Makah whale hunts from the 1920s to the 1990s, a relatively brief period in the context of the Makahs' reliance on whales for over two thousand years.

In the mid-1990s, after the recovery of the Eastern North Pacific gray whale population, the Tribe immediately sought to resume whaling and worked with the United States government to obtain IWC approval of a gray whale quota. Consistent with the International Convention for the Regulation of Whaling and the Whaling Convention Act, the Tribe's hunt is for subsistence and cultural purposes only and prohibits the commercial sale of edible whale products. Following the IWC's approval in 1997 of an aboriginal subsistence quota that reflected the Makah Tribe's needs, the Tribe conducted its first successful hunt in seventy years when a Makah whaling crew landed a gray whale on Front Beach in Neah Bay on May 17, 1999. The Makah community joined in celebration of this event and welcomed the use of whale products back into their homes, communal ceremonies and daily lives.

2) The Makah whale hunt is essential to meet the continuing subsistence and cultural needs of the Makah community.

The Makahs have drawn their subsistence from the ocean since time immemorial. However, halibut, salmon and other ocean fisheries vary in abundance and their availability for harvest is subject to national and international management restrictions and the demands of other harvesters. The increasing variability in catch limits established by international and domestic fisheries management entities diminishes the reliability of the marine resources on which Makahs have always relied. Other environmental pressures, such as oil spills, red tides, pollution, and other factors beyond the control of the Tribe exert additional pressure on the ability of the ocean to meet the Tribe's economic, subsistence and cultural needs. And, for many in a community suffering from high unemployment rates, alternative sources of subsistence remain limited. Gray whales are an abundant and reliable resource that can provide substantial nutritional benefits and offset the limitations on the Makah Tribe's traditional marine resources.

For at least 1,500 years, whale hunting and the associated activities of processing, preparing and eating whale products have had important ceremonial and social functions in the Makah community, in addition to their more obvious subsistence benefits. The Makah whale hunt established a social order for Makah society, governing wealth, status, marriage preferences and ceremonial displays. Makah whalers, or headmen, were at the top of the social order because they could offer prestige, protection and resources to kin and non-kin members of their longhouses. The community-at-large also had an important role in the success of the hunt by processing, preserving and preparing whale products for use by the community.

Makah elders and professional 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 December 2011 demonstrated that an overwhelming majority (85.2%) of the village believes that the resumption of the whale hunt has positively affected the Tribe, and 91.8% 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 well-being of the tribal community. At the same time, they express concern about the domestic legal obstacles that have prevented the Tribe from hunting for more than a decade. While continuation of the hunt would certainly maintain the successes experienced within the Makah community, members fear that social and psychological demoralization will result if the Treaty right to hunt whales is not recognized.

The revitalization of the hunt provided Makahs with an additional mechanism to connect traditional Tribal values about health and spirituality to modern life. This was particularly important after generations of Makahs had been subjected to government policies – commonly implemented through boarding schools – designed to separate tribal members from their language, culture, community, and ceremonial and subsistence practices. The restored hunt reestablished the connection between Makahs and their traditional foods and way of life and assisted young and old in conquering the vicissitudes of modern life. The Tribe needs continued access to the social and spiritual values of whaling, as well as the traditional foods it brings into the Makah diet. For many, denial of whale hunting – and the opportunity to unite with the practices and foods of

their ancestors that the hunt embodies – would introduce a new shroud of oppression into the daily life of Makah people.

3) The vital subsistence and cultural functions of whaling are manifested in the 1855 Treaty of Neah Bay between the Tribe and the United States. Makah negotiators, faced with the diminishment of tribal lands to make way for white settlers, insisted that the right to hunt whales be included in the treaty. The treaty expressly secures the right of whaling in addition to the right to take fish, engage in sealing, and hunt land animals. The whaling right is reserved in Article IV of the Treaty, and is the only express whaling right found in the hundreds of treaties the United States made with Indian tribes. The treaty – alive in the exercise of fishing and hunting rights and confirmed in numerous court decisions over the past century – is a source of great pride for Makahs.

4) The Household Whaling Survey III (Renker 2011) provides an important tool to quantify current opinions of the Makah community about whaling. Data indicate that an overwhelming majority of Makah respondents (94.1%) support the whale hunt, and that most reservation households want whale products to be a regular part of their diet. For example, 80.6% of survey respondents wanted whale meat in their households on a regular basis, and 74.1% of the survey respondents felt the same way about whale oil. The results of this survey are consistent with the high level of support for whaling and demand for whale products expressed in previous surveys. Collectively, the surveys present a clear picture of the mainstream Makah opinion – that whaling is integrally linked to the spiritual, psychological, and physical health of the Tribe.

5) The Makahs request a catch limit that will accommodate an average Makah harvest of four whales per year, with a maximum of five whales in any one year. This request 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. The Tribe’s request honors this tradition, and asks for one whale per village.

Moreover, the ethnographic literature and other records indicate that Makahs harvested five or more whales annually in early historic times (Jewitt 1815, Cavanaugh 1983, Huelsbeck 1988, Huelsbeck 1994). That harvest did not place an undue stress on the gray whale stock in the years prior to 1830, and would not

adversely affect the current, healthy population of the Eastern North Pacific stock. Rather, this modest quota request is necessary to sustain the Makah Tribe, as whales have done for over two thousand years.

The Makah Tribe is participating actively in the IWC Scientific Committee's implementation review to ensure that its hunt does not pose any threat to any segment of the gray whale population. Its proposed hunt will include bycatch limits to protect local feeding aggregations, and will be subject to intensive scrutiny under United States domestic law (including both the Marine Mammal Protection Act and the National Environmental Policy Act) before going forward.

5) For thousands of years, the Makahs achieved and maintained a functional balance with many land, air, and ocean species, especially the whales passing through their waters. In 2003, the Makah Tribe incorporated a Marine Mammal Management Program (MMMP) into its fisheries management office. The Tribe hired a marine mammal biologist to conduct research, collect and interpret data, and coordinate management efforts with other local and national organizations, such as the National Oceanic and Atmospheric Administration (NOAA). The development of the Makah MMMP also enabled the Tribe to participate in the scientific and conservation efforts of the IWC's Scientific Committee, and make important contributions to global efforts to manage cetacean populations.

The Makah MMMP ensures that the Makahs' traditional respect for the natural world and the resources on which the Tribe relies is supported by modern scientific techniques, data and management principles. The program has the capacity to advise the Tribe in managing its whale hunt pursuant to the standards of the IWC and United States domestic law.

6) Whales have played an integral part in the subsistence practices and culture of the Makah Tribe for over 2,000 years. While the decimation of the great whale stocks made it virtually impossible for Makahs, for a brief period, to procure the food that traditionally carried the most extraordinary social, cultural, and nutritional benefits, a restored hunt has provided – and is necessary to continue providing – Makahs with a reliable source of traditional foods. And, it is essential to sustain Makah culture and maintain the benefits secured for future generations of Makahs in the Treaty of Neah Bay.

For these reasons, the Makahs' continuing subsistence and cultural needs to take whales should once again be recognized and respected. The oversight and management provided by the IWC, United States domestic management agencies, and the Tribe itself will ensure that the hunt is conducted within scientifically accepted conservation parameters and will not pose a threat to any segment of the gray whale population.

II. Methods, Definitions, and Linguistic Conventions

Method Statement

For the cultural component of the Needs Statement, the document relies on the interpretation of Makah history, culture, and language. This is accomplished through the juxtaposition of a variety of sources. By evaluating evidence from Makah archaeological sites (like Ozette), 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?ač'** or Why-atch; **c'u.yas** or Tsoo-Yess; and **?use·?iɬ** 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, Huelsbeck 1994).

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 1961, 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, the Nootkans, called **nu.ča.nu.ɬ** in the Makah language.

For the nutritional component of the Needs Statement, the document utilized the methodology and definitions outlined in Food Studies (Miller and Deutsch: 2009), recommended by the

Society for the Anthropology of Food and Nutrition, formerly the Council for Nutritional Anthropology.

The methodology for the Household Whaling Survey III (Renker 2011) is discussed in an appendix of the document.

Definitions

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

A Makah elder is an individual who is enrolled in the Makah Tribe and is over 75 years of age.

Nootkan refers only to Nitinaht and Nootkan peoples since these people are closely related subgroups who live on Vancouver Island.

Hunters and Gatherers is a collective anthropological term referring to one of the five basic subsistence forms: hunting and gathering, herding, horticulture, agriculture, and industry (Bohannan 1963:212). They are people who hunt or collect foods that exist in the environment with little to no directed maintenance effort by the people who rely on the resource. People who fish as their predominant economic pattern are included within the hunting and gathering continuum (Andersen and Wadel(1972:153-54), Smith(1977:17), particularly for anthropologists who work within the framework of maritime anthropology (Leap 1977).

Subsistence refers to the anthropological concept that particular food product or supplement is directly acquired by the people who will use the item for local consumption, trade, and nutritional purposes. The definition of subsistence used by the International Whaling Commission appears in the Annual Report of the International Whaling Commission (2003:14)as follows:

> The definition of aboriginal ‘subsistence use’ proposed by the Cultural Anthropology panel of the IWC Meeting of Experts on Aboriginal/Subsistence Whaling in February 1979 (reported in IWC Special Edition 4, 1982) and subsequently adopted by the IWC in 1982 (IWC 1983)provided that:

(1) The personal consumption of whale products for food, fuel, shelter, clothing, tools or transportation by participants in the whale harvest.
(2) The barter, trade or sharing of whale products in their harvested form with relatives of the participants in the harvest, with others in the local community or with persons in locations other than the local community with whom local residents share familial, social, cultural or economic ties. A generalized currency is involved in this barter and trade, but the predominant portion of the products from such whales are ordinarily directly consumed or utilized in their harvested form within the local community.
(3) The making and selling of handicraft articles from whale products, when the whale is harvested for the purposes defined in (1) and (2) above.

Fisherman – The term is used in this report to describe both men and women involved in Makah fisheries. The term, fisher, which is used as a gender-neutral term in communities outside of the Makah Reservation, reminds Makah people of the mink-like animal that inhabits its forests. In addition, Makah women object to being denied the use of the term fisherman/fishermen, since it is an occupation so integral to the life of the community.

Linguistic and Other Conventions

Elements of the Makah language (morphemes, words and the like) are printed in **bold** type to enhance visibility, and are printed in the Nootkan font. This font provides the correct phonetic representation of the Makah word.

Credentials of the Author

Ann M. Renker received her Ph.D. in anthropology from The American University in Washington, D.C. in 1987. Her dissertation focused on the grammar of the Makah language. Since 1980, she has conducted fieldwork and household surveys on the Makah Reservation, has published articles about the Makah Tribe, and has spoken about her work at national and international conferences. A resident of the reservation since 1986, she has also been an expert witness for the Tribe since 1994.

III. 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, **qʷi.qʷi.diččaq**, 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, Cote' 2010).

Classic descriptions are exemplified in Swan (1860,1870), 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 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). Cote'(2010) provides a focused discussion of Nootkan and Makah whaling in the historic context as well as through a modern lens.

The Whaling Culture of the Makah Tribe

The relationship between Makah people and whales is one of great antiquity. Archaeological data indicate the presence of whale bones in sites 2,000-3,000 years before present, including the Why-atch site dated at 3,850± 75 years b.p. (before present) (Wessen 2012). Food use of drift and stranded whale predated hunting technology. Better-known data from the Ozette site demonstrate at least 1,500 years of continuous whale hunting. This practice continued through the period of contact with non-Indians, and persisted into the 20th 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 several species of whales that traveled through their territory, including the gray (*Eschrichtius robustus*), humpback (*Megaptera novaeangliae*), finback (*Balaenoptera physalus*), and right (*Eubalaena glacialis*) whales. Huelsbeck (1988a:5, 1994:171) 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 multiple seasons, including 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 whales 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 (Huelsbeck 1988a:1).

The Makah 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 Nootkan 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 Nootkan 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, who procured four whales during Jewitt's captivity, compared to Maquinna's one whale. Simple addition indicates that the people of Nootka Sound had the food and product resource of five hunted whales at their disposal.

Using a very conservative estimate, Huelsbeck calculated 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" (Huelsbeck 1988a: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 (Huelsbeck 1988a:4). The picture is one of abundance, not paucity.

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

(Huelsbeck 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 Nootkan 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.

James Swan, the most famous of the chroniclers of Makah people, published the following statement about the annual number of whales taken by Makahs in 1859, just four years after the Treaty of Neah Bay was signed.

> According to the statement of several reliable chiefs, these Indians have taken during the past year 13 whales, 7 of which they killed and 6 were found dead on the beach. They yielded about 10,000 gallons of oil. The tribe during the same time have made some 2,000 gallons of oil from dogfish livers. This oil is very pure and burns almost as well as the very best quality of sperm. The dogfish oil is sold to the whites; the whale oil is almost entirely used for eating by these and various tribes up the Straits, with whom it is traded by the Mackahs (sic) (1860[3]: 78-79).

This account is not unusual. From 1859 – 1866, Swan's diary contains almost three dozen entries which mention some interaction between Makahs and whales. The following sequence from his 1862 diary reflects Makahs hunting and landing whales, locating a drift whale, and unsuccessfully attempting to kill whales. Note that Hosett is one of Swan's spellings for Ozette, and that all diary entries are reproduced verbatim from the original text.

[3] Original Swan documents like this one appear in *Almost Out of the World: Scenes in Washington Territory.* William Katz, ed. Tacoma: Washington State Historical Society (1971), a reprinted collection of some of Swan's earlier and less available writings. I retain the original publication date in citations from the book.

> **March 8** - The Indians killed a whale. It was a young one of the kind called California gray. Walked down this p.m, and got a piece of the fin from Capt. John. I had it boiled and found it very nice and sweet.
>
> **March 26** - Arbarwhoar and other Indians killed a whale at the lighthouse today, report it a very large one.
>
> **March 31** - Indians report that the Hosett people have killed another whale. This makes 4 in 2 at Hosett, one at Tatooche and one at Neeah.
>
> **April 5** - Indians tell one that Aayah of Hosett killed a very large whale on the 3rd. This makes 3 whales killed by the Hosett people since New Year's.
>
> **April 11** - Indians was out today after whales near Wyadda but did not get any although we saw two very near them.(This is most likely Waadah Island.-author note)
>
> **May 13** - Indians found a whale opposite Kiddecubbut this forenoon in sight from the house. It was a dead one, not very large.
>
> **June 30** - Arbarwhoar of Suez killed a whale today at Tatooche.(This is probably Tatoosh Island.-author note)
>
> **July 14** - Kyalanhoo killed a whale yesterday. Towed it to warm houses. (There is a location on the reservation known as Warm House.-author note)

In this diary sequence from March 8, 1862 to July 14, 1862, Swan reported Makahs from a number of villages killing six whales and locating one drift animal. The sequence also indicates that not all Makah whale hunts were successful, and that Makahs hunted whales throughout the winter, spring, and summer.

Makah whale hunting capitalized on the reliable, 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 from 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 northbound gray whale migration through Makah waters occurs approximately 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. Because of the reliable nature of this seasonal event, hunting strategies could mobilize personnel and resources to await the eventual sighting of these whales. 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.) In another strategy, whalers would set out from land in the dark hours before dawn so they could station themselves on the migration route when the sun rose (Waterman 1920).

Whale hunts were not restricted to this northerly migration, however. Swan mentions that "there are several varieties which are taken at different seasons of the year" (1870:19), but does not offer any more information on this subject. His diary, however, offers instances when Makahs hunted whales in January, March, April, June, July, September, and December. It is not surprising that Makahs categorized the meat based on seasonal characteristics. 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 1860,1870, Waterman 1920, Arima 1983), 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, Charles Peterson, who began fishing in the 1920s. He was the son of Chestoka Peterson, the primary informant for T.T. Waterman when he wrote “Whaling Equipment of the Makah Indians” (1920).

> 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’akʷa.qabas**, the second one is **ʔaƛqabas**, 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 Charles Peterson,

> 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 crew members 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 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. Detailed discussions of the equipment and its use are found in Swan (1860,1870), Curtis (1911),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 in 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 and the slower, less aggressive humpback whale. According to the Ozette data, "these were the most abundant species and were relatively easy to capture. Together they account for over 95% of the taxonomically identified whale bones" (Huelsbeck 1994:277).

Descriptions of the hunt and its associated gear are available in a number of ethnographic works. Swan provided one of the first published accounts in the October 22, 1860, edition of the *San Francisco Evening Bulletin.* Swan learned this information

while staying with the Makahs between October 8th and November 27th, 1859.

> In attacking a whale, their canoes are invariably manned with eight men—six to paddle, one to steer, and one at the bow to throw the harpoon. Their harpoons are made either of hoop iron, old shearing metal, or a flat shell sharpened to a point, having barbs of elk horn fastened on each side of the flat surface of the point, bound securely with bark, and neatly fastened to a stout lanyard, varying in length from one to four fathoms. The whole of the spear head is then smeared over with pitch, to give it a smoothness and uniformity of surface. The pole or staff is from 15 to 20 feet long, tapering at each end. When used, the lanyard is made fast to a buoy of seal skin, taken off whole from the animal, and dried with the hair side inwards. This is first blown up full of wind, then the end of the pole is inserted between the barbs, and darted into the whale, leaving the pole which is taken back into the canoe. The short lanyard is used when striking the whale in the head, and has only one buoy attached. The long one is used in striking the body, and has three large buoys to it. When a number of these buoys are fastened to a whale, he is obliged to remain on or near the surface, and is easily killed.

Other descriptions 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 as long as "three to four days" (1939:52); ideally, proper ceremonial preparations would create a set of conditions which would lead to a quick kill, like the one described in Swan's passage earlier in the document.

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 stratification 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 assignations, 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:

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, 1994).

2. Whale products provided a substantial food resource for the Makah people. A 1983 archaeological study indicates 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). However, more recent collaborative efforts between Dr. Huelsbeck and marine biologists have resulted in an adjustment to this early statistic. The previously 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). In addition to nutrition, 25% of bone tools found at Ozette were made from whalebone. Clearly, whale products fulfilled many important subsistence functions.

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 United States law restricts the sale of whale products generated from whales harvested under the IWC quota. However, this law and related agreements with the United States Government do 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 2001, Renker 2006, Renker 2011).

Whale products remain a significant food resource for modern Makahs, in spite of the fact that only one whale has been successfully hunted during the first IWC quota period (1998 to 2002). Oral history recounts Makahs using drift whales regularly until American governmental agencies, personnel, and monitoring efforts obstructed use of this resource. Developments in

communication technology and easier access to remote areas of the reservation increased federal monitoring abilities and hampered Makah efforts to harvest whale products from drift animals as well.[4] Even today, Makahs speak of a loss of a drift or dead whale as a waste of a food resource, a perspective which is very different from that of an average American. This perspective, that a dead or drift whale sunk or towed out to sea was "a waste of food," surfaced repeatedly in the 2011 Household Whaling Survey (HWS III).

During the first IWC quota period, the American government relaxed efforts to dispose of drift animals. In the summer of 2001, a drift whale that washed ashore in an isolated part of Makah territory was butchered and distributed to over 100 Makah households. This event is significant because the increasing Makah demand for whale products connected with the revival of the Tribe's whale hunting and lawful access to the drift animal motivated more Makahs to utilize the food products and raw materials. Transport of the meat, blubber, bone, and other whale parts to Neah Bay was accomplished 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 utilize 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 as food: eyes, brain, heart, and cheeks (the Makah reference to the jaw muscles and the fleshy area under the eyes). Modern Makahs have rediscovered their ancestral appetite for whale products: 74.1% of surveyed households would like whale oil on a regular basis, 80.6% would like whale meat on a regular basis, and 60.6% would like blubber on a regular basis (Renker 2011). Interest in all three food categories increased since the last household whaling survey in December 2006.

Numerous survey respondents indicated a preference for sea mammal products citing both traditional and health reasons. Of the 90.6% of respondents in the third household whaling survey (HWS III) who indicated they would like to have greater access to whale products in the future, 44.7% viewed whale foods as healthier, and 21.8% reported that consuming whale products connected them to their ancestral culture or helped bring ancestral culture to future generations. These data replicated

[4] Makahs report that federal authorities would drag drift whales out to sea, or sink whales drowned in nets, rather than allow Makahs to utilize the carcass.

the findings in the two previous Household Whaling Surveys, HWS I (2001) and HWS II (2006).

The integral place the whale holds in the food culture of the Makah people can be found in the survey responses which ask about the illegal whale hunt in 2007. While the majority of respondents familiar with this event (64.1%) did not agree with the attempt to take a whale, respondents from this group were concerned about the "waste of food" because the whale, which died as a result of the unsanctioned hunt, sank in the Strait of Juan de Fuca. It is doubtful that any other American population south of Alaska would view the loss of such a whale as a "waste of food."

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 the seventy-year gap since the last successful whale hunt in the 1920s. 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 the respondents who received meat in 1999 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 respondents who did not receive whale meat for their personal consumption in 1999, 84.7% indicated that they would have liked meat from the whale (Renker 2001).

With respect to the use of blubber from the 1999 whale, HWS 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 2001).

Whale oil remains 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. Among the Makah, 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 (1860, 1870) 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.

James Swan wrote the following account of Makah food practices and preferences when he spent two months with the tribe from October 8th to November 27th, 1859. Swan would eventually become the first school teacher on the reservation.

> The Mackah (sic) tribe number at present 820 persons, 230 of whom are strong men, or "braves", and the remainder women, children, and slaves. Their means of subsistence are almost entirely drawn from the ocean, and their principal food is whale blubber and oil, dried halibut, salmon and codfish, together with various other kinds of smaller fish, and shellfish of different kinds, such as mussels, crabs, clams, cockles, limpets, sea slugs and snails. Of late years they have accustomed themselves to some of the white men's food, such as flour, hard bread, rice, beans and potatoes, and like other Indians are very fond of molasses, which they eat with their bread and rice; but all their other food is usually greased with a plentiful supply of whale oil (1860: 76).

The HWS III (Renker 2011) 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 170 respondents, 73.2% wanted more information about preparing whale meat, 61.1% wanted to know more about butchering whale, 70.6% wanted information about rendering oil, and 72.4% wanted to know about smoking meat. The interest in each of these categories increased since 2006, when HWS II was conducted. Of 152 respondents in that survey, 70.4% 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 2006).

In fact, the response in each of these categories represents an increase in interest even when compared to the first household whaling survey, conducted in December 2001. Of 159 respondents in that survey, 72.3% wanted more information about preparing whale meat, 53.5% wanted to know more about butchering whale, 61.6% wanted information about rendering oil, and 61.0% wanted to know about smoking meat. It is compelling to note that the Makah connection to whale foods continued to increase although whale products have not been available since the distribution of the 2001 drift whale.

Modern Makahs continue to maintain an interest in whalebone as a raw material. 71.2% of current Makah households report that they would like to have access to whale bone on a regular basis. 63.5% of households would like more information about how to clean whalebone so it can be used for carving, and 65.9% would like additional information about how to carve whalebone (Renker 2011). Once again, the HWS III shows an increase in interest in these categories from the previous survey, in spite of the lack of availability of whale bone since 2001.

Whale bone was even less available to the Makah community than whale food products. In HWS I, some people indicated their disappointment 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 multi-year project (Monette 2002: personal communication). Some 40 Makah high school students learned valuable vocational skills through participation in the skeletal assembly project and experienced the impressive size and structure of the gray whale. The skeleton of the 1999 whale was finally installed in the Makah Cultural and Research Center in November, 2005 (Pamplin 2005), and continues to symbolize the vital restoration of Makah whaling under the Tribe’s treaty right.

Most importantly, modern Makahs celebrate the ceremonial rigor and discipline that was so important to their ancestors. A comparison of the three household whaling surveys provides evidence attesting to this statement. 39.6% of respondents in

HWS I 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 2001).

For many Makahs, it is this dedication to the lengthy and rigorous ceremonial preparation that distinguishes a proper whale hunt from one that is questionable or improper. 83.7% of respondents in HWS III were familiar with a 2007 attempt to take a whale without proper ceremonial preparation or federal sanction, and 64.1% of these respondents viewed the attempt as detrimental to the Tribe, in part because the crew did not follow ancestral protocol. To the majority of survey respondents, the 2007 hunt did not respect the protocol of two worlds, the secular or the spiritual. A lengthier discussion of this hunt appears later in this report.

Unlike the survey responses which related to the whale as food, the survey responses associated with ceremonial practices did not show an increase in all levels of participation. Table I provides the ceremonial participation data from all three surveys.

Table 1 –Ceremonial Participation

	HWS I (2001)	HWS II(2006)	HWS III(2011)
# respondents	159	152	170
# household members	268	234	296
Respondents who practice whaling ceremonies	63 (39.6%)	74 (48.7%)	61 (35.9%)
Household members who practice whaling ceremonies	58 (21.6%)	89 (38.0%)	51 (17.2%)

Total study population who practices whaling ceremonies	121 (28.3%)	163 (42.2%)	112 (24.0%)

Data indicate that the number of 2011 survey respondents participating in ceremonial activities fell back to HWS I levels. The number of household members participating in ceremonial activities also decreased. Taken together, the percentage of the total study population participating in ceremonial activities decreased to a level slightly below the 2001 level. What accounts for the difference?

One possible explanation for the decrease relates to the intense impact that ceremonial preparation has on a Makah household when there is no imminent opportunity to hunt whales. For adults, sexual continence between partners is difficult even when the couple knows the hunt will happen within a few months. To expect a couple to maintain sexual continence with no hunt on the temporal horizon would be destructive to the framework of Makah families. From another perspective, many modern Makahs believe that ceremonial preparation can only be undertaken when an actual opportunity to hunt presents itself. During the current imposed hiatus, the social and spiritual context cannot accommodate certain ceremonial events which prepare for, or celebrate the success of, a hunt. Consequently, significant ceremonies which activate the interaction of the temporal and the spiritual realms of the Makah universe cannot take place.

Another example of ceremonial practice (that can be discussed publicly) which cannot currently happen 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 1870, Densmore 1939) as well as recent depictions of pre-contact life (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. Two of these women were brought onto Front Beach according to ritual; they were wrapped in shawls and sprinkled with eagle down while drummers alerted the passers-by with a rapid drumbeat to scare away unwanted spiritual beings.

In order to strengthen the skin, steel the constitution against the elements, and cleanse the heart and mind, men continue to practice ceremonial preparations like bathing in cold water. Like their ancestors, Makah men have secret outdoor locations as bathing areas, like the pools that collect at the bottom of waterfalls. Some of these locations are deep within the forests, as are the areas where other, even more secretive rituals, take place. 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, but are not quiet about the potential misfortune that awaits those who do not follow traditional hunting protocols.

Makah Whaling: Pre-Contact through the Present Day

The Ozette archaeological literature, especially the work of Huelsbeck (1983, 1988, 1988a, 1988b, 1994), attests to the considerable time depth and continuity of the Makah whale hunt. The Makahs and their Nootkan relatives hunted whale successfully for at least 1,500 years before the present day without destroying the resource. Ceremonial, social and cultural proscriptions established a functional balance between the Makahs and the whale populations which passed 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 neighboring tribes and with the visitors.

The regularity and size of the gray whale migration attracted whalers from the United States and Europe. Like the Makahs, 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 1972:17). By 1852, Makahs were trading or selling some 20,000 gallons of whale and fish oil (Lane 1972:18); this figure would rise to 30,000 gallons per annum within 20 years (Gibbs 1877:175).

In 1854, Capt. Charles M. Scammon discovered the wintering and calving grounds of the gray whale in the lagoons of Baja California and Mexico (Scammon 1874, Hagelund 1987:42-43); this

discovery now provided the two terminal points for the gray whale migration, 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 in the Treaty. 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, the United States aggressively pursued policies that were intended to transform Makahs and other Indian communities into "civilized" people. Assistance sent to the Makahs contained agricultural tools, rather than items which supported any of the active components of the Makahs' maritime way of life. 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).

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 rugged 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.

Ideas of native peoples as civilized farmers dominated federal Indian policy in the nineteenth century. This paternalistic policy had been developed with a very different perspective, namely, the United States government did not want to encourage self-sufficiency of the Makahs on traditional subsistence resources, because self-sufficiency often encouraged fishermen, hunters and gatherers (not to mention whalers) to travel beyond the confines of the established reservations, and to maintain cultural practices considered savage, barbarous, and antithetical to the goal of civilizing and Christianizing them. The best way to force a sedentary existence on a group of fishermen and hunters and gatherers was to make the group dependent upon agriculture, which required a fixed resource base. The singular nature of this policy, by definition, 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 policy. "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 education system that ignored Makah priorities and prohibited the use of their language, in addition to eradicating customs considered heathen, savage, and dangerous (Colson 1953, Gillis 1974, Whitner 1977, Marr 1987, 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 staunchly resolved 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).

School provided the vehicle for the radical cultural changes the government wanted. Beginning in 1863, a day school operated on the reservation, but the sympathetic teacher, James Swan, did not produce the expected changes, and he was fired in 1866. By 1874, a boarding school was established, and families were persuaded with threats when they were hesitant to give up their children (Marr 1987: 15).

> The expressed intent of the boarding school was to remove children from the influence of their families, especially the elders who taught them the ways of the past. Children were told by their teachers that the traditional ways were evil and backward. Only by these means, it was felt, could the young people truly attain the values and scholarly accomplishments necessary for the assimilation into white society. The crude adage "Kill the Indian but save the man" was an apt summary of this philosophy (Marr 1987:15).

The government had established the school two miles east of Neah Bay, and changed the educational program to that of a boarding school. Living away from their parents for weeks at a time had a devastating effect on Makah families. Perceived as a small distance today, the two-mile separation from their families served to create a cultural and linguistic gulf between generations. By 1880, English was becoming the predominant language for the younger generations whose lives began to be determined by a non-Makah annual cycle (Gillis 1974, Marr 1987). After 1896, any Makah who wished to have an education beyond the sixth grade "had to travel to distant boarding schools hundreds of miles away in Oregon or other parts of Washington state" (Marr 1987: 36). Inevitably, the boarding school experience – by design of the American government – took a severe toll on the connection between young Makahs and their community's culture, language, and subsistence reliance on whales and other marine resources.

"Can you imagine a village without children?" an elder, Edie Hottowe, told this author. The hateful situation moved her parents, Luke and Ada Markishtum, to donate their ten acre federal land allotment to the State of Washington in 1932, so a public school could be built on the reservation. Now in operation since 1934, the Neah Bay School system stopped the separation of Makah children from their families while receiving a formal education.

If there is any doubt about the lasting effects of the boarding school indoctrination on the Makah people, consider the following experience of Hugh Smith, Makah elder, native speaker, and tough, experienced fisherman who was fearless on the water and tireless in his physical exertions. He still bathed daily in the cold waters of the Pacific Ocean till he reached his eighties. In 1988, the author took an 80 year old Mr. Smith to the Neah Bay Elementary School. He was going to begin helping the Makah Language Program teach Makah to the children in the school. Bear in mind that the current school had nothing to do with the location or architecture of the boarding school.

As we approached the front door of the school, Mr. Smith began to tremble. His breathing increased, and he stopped dead in his tracks at the threshold of the front doors. “I can’t go in there,” he said. Puzzled, since we had discussed this teaching assignment, I asked, “**baqiq**”,(What?). “They hurt me,” he said. “Last time I was in there (the school), I slipped and spoke **qʷi.qʷi.diččaq** (the Makah language). Teacher put a dead seagull around my neck and locked me in a closet. Never went back. Ran away.” He was tearful now. We retreated to my car, and went back to the Makah Museum, the location of the language program offices. Eventually, Mr. Smith did overcome his fear and became a valuable resource in the efforts to preserve and teach the Makah language, but the author never forgot the visceral reaction which overtook him the first time he visited a school in over 70 years.

Given the cultural impacts of the government’s assimilation policy on the Makah people, it is no surprise that the traditional economy did not go untouched. 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 (1973) 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 (1973), 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.

At this same time, President Grant's annual message announced an Indian policy which sought to "Christianize and civilize the Indian" (Whitner 1977:18). Further, Pacific coast whale populations were diminishing, and the Makahs who continued to whale hunt had to make adjustments. Singh (1966) and Van Arsdell (1976) indicate that Makahs increased their seal hunting efforts to compensate for a less profitable whale hunt, a view that modern native scholars like Cote' (2010), dispute.

> Increased contact with non-Indians and pressure from federal agents to give up their cultural ways created dramatic changes in Makah and Nuu-chah-nulth societies. During this period of intense social, political and spiritual change, they were able to adjust and modify their economies, adapting to new maritime industries while at the same time staying connected to their whaling traditions (2010:62).

"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,v.2:396) and Waterman (1920:48) 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), partially because hereditary whaling chiefs could no longer secure crews. Seal hunting was open to all men, regardless of family status or inherited privilege. The increasing role of cash in the reservation economy motivated many to pursue seal hunting and an opportunity to improve life for their families.

The strain on the social stratification component of whaling continued to increase as did the profits of the more egalitarian pursuit of sealing. "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 loss of the Makah whalers in a letter written on November 29, 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. In 1897, the United States prohibited nearly all fur sealing; 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. Makahs, once again, redirected their economic efforts to another traditional economic pursuit, marine fisheries.

While whale hunts were "still the symbolic heart of the culture" (Marr 1987:25), they continued to diminish in frequency, in part because of the global collapse of the whale populations. 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 select crew members 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 immediately resume full-scale 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, originally published in 1860, and reprinted in 1927. 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 (1927:182).

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 government's opinion that boarding schools were the only way to eradicate ancestral practices, which offended the American sense of morality and decorum. Indian 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. As discussed above, a critical means of achieving this objective was by separating Makah children from the influence of their family via the use of boarding schools. 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. The impact on Makah people was traumatic and protracted, as exemplified by Mr. Hugh Smith's experience, recounted earlier in this section. 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 whaling practices, beginning with the mid-19th century discovery of the Baja calving lagoons. The population of gray whales was reduced by non-Makah commercial hunters, making Makah hunting in canoes more difficult. Since one Makah method 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 this form of whale hunting. 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. Only three recorded whale hunts took place during 1905 (AW Smith Papers).

In addition, the intensive investment required by a whaler and his crew had not changed; men and their families still had to invest enormous amounts of time in ritual preparation that was under scrutiny and efforts to eradicate by federal authorities. Care and maintenance of the whaling canoe and other associated gear could not be overlooked; this required time and investment as well. Without the plentiful supply of whales which had always graced Makah territory, this intensive investment became difficult to justify. Remember, 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), so the loss of this resource was devastating.

Halibut and ocean fishing were productive and important economic pursuits for Makahs prior to contact with non-Indians (Huelsbeck 1994:72) and in the years leading up to the treaty. These pursuits required little ceremonial preparation, and were not associated with social structures like hereditary status and ritual wealth. In addition, traditional knowledge of abundant halibut banks and other offshore fishing areas, and the ability to exploit these resources, was not as affected by epidemics and other social and ritual interruptions as whaling. Ocean fishing remained a productive venture which used the same navigation and seafaring skills that both whale and seal hunters needed and used. The increase in non-Indian demand for halibut and other ocean fish propelled Makahs from a subsistence-based fishing economy with local trading opportunities to a commercial harvest with markets as far away as the east coast of the United States and Europe.

Consider that the traditional halibut grounds of the Makahs supported this expansion of the halibut fishery. The 1888 Report

of the Neah Bay Agency to the Commissioner of Indian Affairs contained the following statement:

> These waters abound in large quantities of halibut, cod, and salmon. Large numbers are caught by the Indians, a part of which they sell in towns up the Sound, and the remainder they dry for winter use. They have caught 9 whales thus far this season, which they use for winter food (Powell 1888: 225).

Reports of Indian agents and from sailors who hunted with Makahs on sealing schooners spread the word about the bounty of Makah offshore fishing banks, leading the way for the large-scale commercial exploitation of this resource.

> The initial impetus for the expansion of the commercial fishery for halibut occurred in 1888 when three sailing vessels from New England began fishing off Cape Flattery, Washington. The catch was shipped from Tacoma to Boston on the newly-completed trans-continental railroad (International Pacific Halibut Commission 1998: 19).

Makahs parlayed their traditional knowledge of offshore fisheries to their benefit as well. By the late 1880s, “the catch by the Makah Indians at Neah Bay, Washington…was reported at 600,000 pounds annually (International Pacific Halibut Commission 1987: 16). Daily catches were equally impressive.

> 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).

In spite of the abundant fish resource, 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 of the Makah commercial fur seal hunt cemented a place for a cash economy in the households of the reservation; the eradication of this source of money contributed to the economic disruption as well. When these factors interacted with severely diminishing gray and humpback populations, it is not surprising that Makahs transitioned to the traditional and reliable practice of ocean fishing for their subsistence as well as commercial purposes.

In spite of these factors, the Makah desire to reinvigorate the whaling tradition never dissipated. Households took advantage of drift whales for food and materials before federal communications and supervision began to prohibit this practice. Families pass on whaling stories, traditions, songs, and secrets from generation to generation. Whaling designs and crests still decorate public buildings and private homes. Makahs proudly display historical photographs of their whaling ancestors in their homes, and the public school on the reservation exhibits whaling artifacts and photographs. Accounts of Makah whalers are read again and again in school and homes. Whaling displays in the Makah Cultural and Research Center and other museums keep 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 First Gray Whale 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. Despite the concerted effort by the United States over more than a century to eliminate whaling and other critical components of Makah culture, 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 other 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 three 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 as well as revive ancestral food traditions 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 Tribe 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. First opened to the public in 1979, efforts to create the facility took nine years and a half-million dollars of Makah tribal funds, in addition to money raised from other sources. 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 centralized and incorporated 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 Tribe had stored in its minds and hearts for seventy years: they brought a whale home to the Makah people. 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 HWS I(Renker 2001) 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 poorly 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 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 an Alaska Native. 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 liked 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 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 October 1997. A decision in this case on June 9, 2000, 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 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 June 9, 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.

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 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(HWS I) 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. Makah tribal members living in Neah Bay also 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, 35.5% noted food, better nutrition, or a traditional diet, and 36.2% felt that maintaining or restoring some aspect of cultural heritage or tradition was the most important. 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 159 respondents, 80.5% were watching live television when the whale was taken, as were 76.2% of the respondents' household members. 83.6% of the 159 respondents were present at Front Beach in Neah Bay when the whale was brought ashore, as were 87.6% of their household members.

4. 82.4% of the 159 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 community dinner and celebration.

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 HWS I results supported the perspective that whaling was a vibrant and continuing tradition with dormant components, and was far from an obsolete, abandoned cultural practice of the Makah Tribe.

Makah Whaling 2003 - Present

The period of time since the initial gray whale quota, which included IWC quotas for 2003-2007 and 2008-2012, has been 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 way of life 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 simultaneously be sacred animals and food, "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 2006). And, while the Tribe was assuming its responsibilities to merge traditional management strategies with internationally accepted scientific principles, exercise of its Treaty rights were put on hold by a series of legal rulings that placed bureaucratic hurdles between the Tribe and its traditions (Roghair 2005: 210). By 2011, 5.3% of HWS III respondents reported concerns about the negative reactions directed toward Makahs by non-members who opposed whaling, with respondents harkening back to the unfortunate attitudes they encountered in 1999(Renker 2011).

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. 94.1% of respondents in the HWS III supported the Makah Tribe's efforts to restore the traditional whale hunt, a slight increase from HWS I ten years earlier. After ten years of impediments and disappointments, there is still a consistent base of support which feels a connection to whaling. This figure indicates the profound level of support for the restoration of

whaling for another reason: 64.7% of respondents in HWS III were not interviewed for either of the previous household surveys.

The next parts of this section discuss these two issues – marine mammal management and whaling culture – from 2003 till the present day. 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 (Makah Financial and Harvest Information 2007); $404,000.00 of tribal funds was spent on whaling related activities since 2007 (Makah Financial and Harvest Information 2012).

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 (MFM) Department. The objective of the MMMP is to monitor marine mammal populations within the Tribe's usual and accustomed areas (U&A), conduct research about these populations, and assist the Tribal Council in developing regulations for the management of marine mammals. The MMMP consists of a marine mammal biologist and a research technician. As needed, the MMMP contracts with experts in the fields of ecology, genetics, and population dynamics.

The MMMP conducts research on all marine mammals in the U&A but the primary focus is gray whale research. The program's goal is to collect and evaluate the data necessary to ensure that the Tribe's whaling is consistent with sustainable management principles. Another goal is to increase the body of scientific knowledge regarding gray whale biology and ecology, so that the Tribe's whaling management utilizes the best available science. The MMMP achieves these goals through extensive field research and collaboration with NOAA Fisheries, Cascadia Research Collective, and many other partners.

The program annually participates in photo-identification studies of gray whales off of northwest Washington as part of a

collaborative research project on the life history of gray whales feeding along the Pacific coast south of Alaska in the summer and fall. This collaborative work was presented to the IWC Scientific Committee in paper SC/62/BRG32. In addition to conducting photo-identification studies in the U&A, in 2010 the Tribe funded the collection of biopsy samples from California through British Columbia and from Barrow, Alaska. These samples were analyzed in a collaborative study to evaluate the genetics of gray whales summering along the Pacific coast and whales summering on northern feeding grounds in the Bering, Chukchi, and Beaufort Seas (SC/M11/AWMP4).

The MMMP has participated in the IWC's Scientific Committee meetings since 2004 and has presented papers on topics ranging from the Tribe's whale killing methods (IWC/58/WKM&AWI 15) to the MMMP's research on gray whales within the Makah U&A (SC/MK11/AWMP5). The MMMP also contributed to collaborative research on the "stinky whale" issue (IWC/59/CC 15). Jonathan Scordino, the Tribe's marine mammal biologist, is a participant in the current implementation review for the gray whale, which is focusing on the potential impacts of the Makah hunt on the Pacific Coast Feeding Group (PCFG). Mr. Scordino also co-authored an analysis of non-hunting, human-caused mortalities of PCFG whales (SC/63/REP. 2 – Annex C).

The MMMP also conducts research on other marine mammals in the U&A and aids other departments of MFM with fisheries research. Current research projects for marine mammals (other than gray whales)include: Steller sea lion life history, food habits, population counts and seasonal haulout use patterns; California sea lion food habits and life history; seasonality and magnitude of domoic acid and saxitoxin concentrations in sea lion scat; and metal concentrations in kidney and liver of marine mammals stranded in Washington. The program is studying river otter food habits and is preparing to evaluate the efficacy of traditional Makah fishing practices in reducing fisheries bycatch.

The MMMP also conducts research regarding the frequency and cause of marine mammal strandings in the Makah U&A, and is an active member of the regional stranding network. This role is of particular importance given the remoteness of the Washington coast from Seattle and other population centers. During 2011, the program responded to 54 stranded marine mammals on the Makah Reservation and surrounding areas. In previous years, this work has included disentangling whales caught in fishing gear.

In addition to research, the MMMP has many responsibilities in support of the Tribe's management of marine mammals. The MMMP assists the Makah Tribal Council in establishing regulations governing interaction of tribal fisheries with marine mammals. It will play a critical role in the Tribe's management of whaling. In addition, the MMMP represents the Makah Tribe as a technical expert in meetings with NOAA Fisheries, Washington Department of Fish and Wildlife, and the United States Fish and Wildlife Service regarding marine mammal science, policy, and management. The Tribe's marine mammal biologist has also been invited to participate in the Pacific Scientific Review Group, a body of independent scientists which evaluates NOAA Fisheries' marine mammal management proposals and other scientific bodies focusing on marine mammals.

The MMMP plays an important role in the exchange of technical information on aboriginal subsistence whale hunts. In 2005, the program organized and participated in a cultural/scientific exchange with the Chukotkan people 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.

The MMMP is active in educating and providing outreach to the Makah community. Each year the MMMP coordinates an internship for Makah youth on fisheries and environmental science at MFM. The youth are immersed in the daily research responsibilities of the MMMP and other MFM programs and write a scientific paper or research proposal at the conclusion of the internship. The MMMP also presents information about Makah whaling and whale science in classrooms in Neah Bay and other schools in the region.

The creation of the Makah MMMP and its extensive contributions to science, research, policy, and education clearly demonstrates the Tribe's strong interest in and commitment to the conservation and scientific understanding of marine mammals, and of gray whales in particular. Through this commitment, the Tribe can ensure that its management of whaling will be sustainable and consistent with the best available science. As a whale hunting people, the Tribe is keenly aware of its obligation to balance its need to harvest a limited number of animals and the health of the species as a whole.

b. Cultural Activities

Whaling is an integrated part of Makah life on the reservation.

Since 2003, most Makahs demonstrated their support for whaling efforts by simply going about their daily business, and by following the complicated legal obstacles that prevented a hunt from taking place (65.8%) (Renker 2011). While the 2011 HWS III revealed that private, whaling-related ceremonial activities are still taking place, 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, and signage. A good deal of the public art in the village, including images inside and outside the public school and the Tribe's buildings, contains whales. 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. People adorn their homes with historic photos of their whaling ancestors and whaling canoes full of gear. Whaling artifacts are also easily visible in reservation households and in exterior landscapes, because people display the gear used by their ancestors, as well as skeletal parts of whales and baleen.

This connection between Makah people and the Tribe's whaling traditions is not a superficial one. Parents, grandparents, and other relatives sing Makah songs to infants, tell family histories and stories, and bring children to potlatches and other native gatherings. If children do not learn any Makah language from their family members, instruction in school 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.

By 2009, Neah Bay High School and the Makah Cultural and Research Center collaborated on a bold plan to increase the exposure of Makah students to the social, cultural, and economic changes that affected their families at the end of the nineteenth century and the beginning of the twentieth century. The MCRC installed their award-winning photographic exhibit, *Portrait in Time*, in the halls of Neah Bay High School. Students in grades 9-12 now passed by historic photos which documented the major changes in Makah whaling, sealing, and fishing, as well as the village of Neah Bay itself; part of this exhibit also represented the boarding school era.

In the summer of 2010, the Tribe and the school cooperated in another public celebration, this time for the annual Tribal Journeys celebration. Every year Makahs and other coastal tribes join to celebrate the role of canoes and sea travel in their respective cultures, and thousands travel by canoe to a designated reservation where a multiple-day festival of tribal song, dance, and tradition occurs. The Makah Reservation was the terminus for Tribal Journeys in 2010, and approximately 10,000 people traveled to the site to be hosted by the Makahs. The main stage was installed on school property, which was also used to help feed and house visitors. When the time came for the Makahs to take their place on stage, they represented themselves to the assembled throng with a whale dance that symbolized the connectedness between whales, wolves, and humans, as well as the sea and the forest.

Developments continue in this area. In the spring of 2012, the school began a new chapter in educating young Makahs about the responsibilities which surround stewardship of the marine environment and marine mammals. Under a grant from the education and outreach division of the National Oceanic and Atmospheric Administration, Neah Bay High School will work with marine mammal biologists to develop a curriculum to educate young Makahs about the Marine Mammal Protection Act.

Other whaling-related cultural/educational events involved Makahs who wanted to learn more about whaling techniques and processing whale products. Since 2003, two groups of Makahs traveled to Barrow, Alaska, to gather information from Inupiat

whalers 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 MCRC to develop 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 November 2005 installation of the skeleton of the 1999 whale in the canoe gallery of the MCRC. 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 now view, and honor, the whale that touched the hearts and souls of the Makah people in their first successful hunt in seven decades. Makahs hoped this display would help the Tribe to counteract the lack of understanding that surrounds their relationship with whales and their whale hunting efforts.

Unfortunately, without an active whale hunt, Makahs suffer. 85.2% of respondents in the 2011 HWS III indicated that whaling had a positive impact on the Tribe, an increase from the 79.6% of respondents in the 2006 HWS II. 66.5% of HWS III respondents view the primary benefits of the whale hunt in terms of cultural maintenance, tribal unity, and an improved quality of life. Another 10.6% of respondents view whaling as a source of pride for the tribe. These reasons differ from the responses in the 2006 HWS II. In that survey, 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 seven male high school students was using or experimenting with drugs and/or alcohol in 2010 (Healthy Youth Survey 2010).

48.4% of HWS III respondents share an opinion that a proper whale hunt is linked to the clean/sober, healthy lifestyle that hunters and their families must have, and that these are a critical part of the Makah Tribe's spiritual profile. The hunting moratorium places Makah families at risk because important ceremonial practices cannot take place. These

ceremonies have evolved over millennia, and cannot take place unless hunters are preparing for an actual hunt. Without an active hunt, tribal members fear that an important part of the ceremonial life restored during the hunting period in the late 1990s will remain in jeopardy. The decrease in ceremonial participation for respondents in HWS III could be a reflection of the delay in executing a proper whale hunt. HWS III data support this perspective, since 32.4% of respondents indicate that they cannot fully participate in Makah culture when there is no whale hunt.

The protracted legal battles that have delayed whaling have negatively affected the Makah Tribe in other ways as well. Makah Whaling Commission (MWC) 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 when the 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. 37.6% of HWS III respondents agree, and believe that the most important aspect of the whale hunt is related to retaining, exercising, and maintaining sovereign treaty rights (Renker 2011).

Many of the views of the MWC members were echoed in the HWS III. 75.9% of respondents viewed the delay in the whale hunt as negative, and characterized the problem as the violation of treaty rights (18.8%), the inability to practice Makah culture properly because of the long delay (30.0%), and the impact on the spiritual and emotional well-being of tribal members, particularly the youth (23.6%). Marker (2006) verifies this opinion by discussing the effect that the stress of intolerance has on children.

The stress of the lengthy delay and the complicated legal entanglements reached a peak in September 2007. Five Makah men

attempted to hunt and kill a gray whale in the Strait of Juan de Fuca without the benefit of a tribal permit or ceremonial preparations. Because the federal government had not completed the domestic process for sanctioning Makah whale hunts at that time, the Coast Guard intervened, the men were arrested, and the mortally wounded whale sank to the bottom of the Strait. 83.5% of the respondents in HWS III were familiar with this event, and 64.1% of this group of respondents thought that the incident was a severe setback for the Tribe, in part because the crew did not practice ritual ceremonial preparation. 28.2% of respondents offered the perspective that the hunt was merely an exercise of the Tribe's treaty right, and that the whale should not have been allowed to go to waste. 9.4% of respondents had mixed feelings about the 2007 event, mostly because the whale could have provided a great deal of food for the Makah community. While the majority of respondents expressed the wish that the 2007 event had not happened, they still retained a passion for the restoration of a legal hunt in the near future.

c. Summary of Legal Impediments to Makah Whaling, 2002-2012

Although the Makah Tribe has had IWC authorization to hunt gray whales since 1998, it has not been able to exercise its treaty right to engage in whaling for most of those years, including the entire period since 2002, because of complex – and highly protective – domestic legal requirements. Even if the IWC renews the catch limit for gray whales this year, the Tribe will not be able to resume its hunt until it satisfies these requirements.

Under United States law, the Secretary of Commerce, acting through the National Oceanic and Atmospheric Administration (NOAA), must authorize the Makah hunt before it may take place. In a decision first issued in 2002, and finalized in 2004, a United States appellate court held that NOAA must prepare an Environmental Impact Statement (EIS), the highest level of environmental review under American law, before authorizing the Makah whale hunt. In addition, the court held that the Secretary of Commerce must waive the take prohibition in the United States Marine Mammal Protection Act (MMPA) before a Makah harvest of gray whales can take place. The waiver process requires an on-the-record hearing before an administrative law judge, at which opponents of Makah whaling can participate and present testimony and other evidence.

Although the Makah Tribe strongly disagreed with this court decision, it halted its hunting efforts in order to comply with

it. The Tribe began the administrative process to obtain an MMPA waiver from the Secretary of Commerce by submitting a waiver application to NOAA in February 2005.

As required by the court, NOAA began preparing an EIS after it received the MMPA waiver application 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 identify potential issues which need to be addressed in the EIS. These meetings occurred in October 2005.

NOAA completed the first draft of the EIS and made it available to the public in May 2008. NOAA presented information from the draft EIS at three public meetings and accepted comments on the draft for a period of three months. Since early 2009, however, the EIS process has largely been on hold so that NOAA can evaluate new and relevant scientific information, including: 1) a 2009 time series of abundance estimates for the ENP stock of gray whales; 2) a 2010 evaluation of the ENP stock's population dynamics relative to its optimum sustainable population; 3) studies in 2010 and 2011 regarding the genetics of ENP gray whales and the Pacific Coast Feeding Group (PCFG); and 4) 2010 and 2011 satellite tag and photograph ID studies of gray whales migrating between the western and eastern Pacific Ocean. NOAA is also conducting a review under the MMPA of the status of the ENP stock and whether the PCFG is a separate stock under the MMPA.

Once NOAA completes the EIS process, including issuance of a new or supplemental draft EIS that will consider the new information described above, provides additional opportunities for public comment, prepares responses to public comments, and publishes a final EIS, it will be able to determine the potential impacts that Makah whaling could pose to the environment (including impacts to local populations of gray whales and the ENP stock as a whole), and make a preliminary decision about granting an MMPA waiver. Additional administrative proceedings on the waiver application – including the public hearing mentioned above – would then follow.

It is likely that any final decision by NOAA to authorize a Makah hunt will be challenged in court. All of the Tribe's efforts to increase tolerance and understanding of its whale hunt, a hunt which is a spiritual manifestation of the connection between the Makah and their Creator, have not prevented opponents of Makah whaling from challenging every

decision by NOAA to authorize Makah hunting up until now. Thus, despite the fact that the Tribe delayed exercising its Treaty right until the ENP gray whale population had returned to healthy numbers, despite the Tribe's efforts to limit the scope of its hunt and comply with all IWC humane kill requirements,[5] and despite the Tribe's efforts to contribute to the scientific work of conserving gray whales, opponents of Makah whaling will likely ensure that any new decision by NOAA to authorize a Makah hunt will be reviewed in court.

In September 2007, five Makah Tribal members struck a whale in the Strait of Juan de Fuca with harpoons and high-caliber rifle bullets. The five men did not have authorization from the Makah Tribal Council, the Tribe's governing body, or from the United States government for this attempt to take a whale. The five men were prosecuted in U.S. federal court for violations of the MMPA and other federal laws. Three men entered guilty pleas and were sentenced to two years of probation and community service. The other two men were convicted and served three months and five months in prison. They were also sentenced to one year of supervision and community service following their release. All five were barred from any participation in whaling activities during the period of probation or supervision. The federal prosecution of these men makes it highly unlikely that any future hunt will occur before it is fully authorized under complex and highly protective requirements of United States law.

The Makah Reservation in 2012

The contemporary Makah Tribe lives on a 46.5 square mile reservation (Makah Planning Office 2012), which dominates the northwestern corner of the Olympic Peninsula of Washington State. Other reservation properties include two offshore islands, Tatoosh and Waadah, and a 719-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(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 Swiftsure 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

[5] *See* IWC/58/WKM&AWI 15 for a description of the Tribe's hunting method, including analysis by a ballistics expert hired by the Tribe of the high caliber rifle used to dispatch the whale humanely.

Pacific waters as far south as Cape Johnson, called **xacicʻu?a·** "deep hole" (Swindell 1942, Renker and Pascua 1989).

In 1855, the Tribe signed the Treaty of Neah Bay, which established the first boundaries of the reservation but did not recognize the multiple village system. Negotiators for the Tribe discussed the Makah relationship with the ocean; the Tribe considered the ocean to be territory more important than land. **cʻaqa.wiƛ̓**, one of these Makah chiefs, articulated this point. "I want the sea. That is my country" (Gibbs 1855). It was estimated 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 Ozette village 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 **qʷidiččaʔa.txˇ**, "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. Census 2010 places the reservation population at 1,414, with 75.4% of the population listed as American Indian (Census 2010). In 2010, the Makah Tribe's Planning Office documented 1,121 Makahs living in 485 households on the current reservation; a non-Indian resident population of 348 live in approximately 49 reservation household units. Another 1,512 Makahs live away from the reservation (Makah Tribal Enrollment: 2010). 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, **waʔacˇʼ** (Why-atch) and **cʼu·yas** (Tsoo-yess).

In order to meet the needs of its people, The Makah Tribe has made a commitment to diversifying and expanding its access to and use of traditional resources. A critical reason for this effort is the low per capita income on the reservation: $11,030.00 (Census 2007). The per capita income of other Americans is almost twice that amount, $21,587.00 (Census 2007). Living on the remote reservation actually reduces the value of this household income. Since food and supplies have to be transported a long distance, it costs the average Makah family more money to feed their family each week. Either supplies on the reservation reflect this extra cost and are more expensive, or it costs Makahs more money to travel to find cheaper food. Consider also that the median income for a Makah household is $21,635.00. A white family in the same county has twice the median household income, some $45,284.00 (Census 2007).

With support from the Ford Foundation, the Makahs undertook a multi-year Community-Based Forestry Initiative (CBFI) project from 2006 to 2009. 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 the opportunity to participate in increasingly popular markets for wreaths and floral arrangements made from Makah forest products.

Increasing the shellfish resource is another focus of the Makah Tribe. The 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 growing market. Part of Dr. Gao’s research benefits the efforts to understand why the dissolved oxygen level in the Hood Canal has been so low in recent years, as well as important information about “ocean climate change and acidification”(Makah Fisheries Management 2012: 24-27).

Marine fisheries have always been important to the Makahs. Along with whaling and sealing rights, the right to harvest fish in the Tribe’s usual and accustomed areas was secured through the 1855 Treaty of Neah Bay. The treaty fishing right was confirmed in a landmark federal court case in the early 1970s,

where the United States along with Makah and other tribes sued Washington State for interfering with their federally protected right. The Tribe already had a long history of managing its off-Reservation fisheries, but after the 1974 "Boldt Decision," such management expanded significantly. Now, the Tribe's fisheries management program is responsible for regulating Makah fishermen in their exercise of the Tribe's treaty fishing right in diverse ocean and freshwater fisheries, including longline, trawl and gillnet fisheries. As a federally recognized co-manager, Makah Fisheries Management participates in a wide range of domestic and international fisheries management forums (including, for example, the International Pacific Halibut Commission, the Pacific Salmon Commission, the Joint Management Committee on Pacific Whiting, and the Pacific Fishery Management Council), which, like the IWC, establish catch limits for different species. The Tribe actively conducts research, monitoring and enforcement related to its fisheries and has an experienced and dedicated staff to carry out the vitally important management component of exercising the treaty fishing right.

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 generated approximately $2.4 million in 2011 and in recent years has generated between $3.5 and $4.5 million for the Reservation economy depending on the annual allocation. (Makah Financial and Harvest Information 2007, 2012)

The Tribe has also substantially developed the longline fishery for black cod (**bi.ša.wix**ˇ), 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. The black cod fishery generated approximately $2.9 million in 2011; however, this amount was lower than in previous years due to a decrease in the allocation (Makah Financial and Harvest Information 2012).

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). For the 2011-2012 public school year, 65% of families qualify for the free and reduced lunch program because of incomes below the federal threshold (OSPI State Report Card: 2011), and approximately 114 reservation households rely on food banks and federal food programs to feed their families (Makah Tribal Council Annual Report 2012).

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 (Makah Financial and Harvest Information 2007).

The 1988 Makah Household Fishing Survey 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.

The HWS III validates the interest in traditional Makah foods, especially whale products. Almost a quarter of respondents indicated that healthy, sustainable whale products were the paramount reason Makahs should continue whaling. 62.9% of respondents wanted whale products in their homes because they perceived ancestral food and food patterns to be healthier for Makahs (Renker 2011).

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.

The HWS III indicated that respondents and their household members participate in these redistributive networks. 23.5% of respondents indicated that they participated in redistributive networks with whale products since 1999. As for household members, 21.7% participated in these same networks (Renker 2011).

Over the past fifteen years, the Makah fishing fleet has transitioned from its traditional focus on salmon and halibut 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, management restrictions, and the low price of fish relative to the cost of fuel and gear.

The Makah Tribe has also experienced substantial changes in its halibut fishery. The Makahs had regularly harvested two-thirds or more of the allocation for treaty tribes in Washington state. Over the past couple of years, however, management and effort in this fishery has changed dramatically, and now the Makah halibut fleet harvests only 35 to 40% of the tribal allocation. (Makah Fisheries Management 2012: 16-17). This change has resulted, in part, from increased fishing effort by tribes with shorter distances to their fishing grounds than Makah. The decrease in harvest of this important resource also translates to fewer halibut introduced into traditional reciprocal networks; fisherman have to sell as much of their smaller catch as possible.

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 these gaps, since HWS III 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 households which rely on marine resources for their subsistence. 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 Makah subsistence needs. The Makah Tribe, like many other governmental agencies, cut its operating budget by 15% from the most recent operating year (Makah Finance and Harvest Information 2012). Cutbacks in food and financial support from public assistance programs affect families which are already economically stressed, increasing their need for subsistence resources.

Drug abuse has increased dramatically on the reservation in the last calendar year; intoxication arrests have increased alarmingly in that same period of time. Burglary has increased as well (Makah Tribal Council Annual Report 2012). The annual public safety report suggests that the increase in burglary and overall arrest warrants are probably related to the increase in drug and alcohol use.

These figures indicate that the Makah community is still in flux: the enormous social disruption caused by epidemics, boarding schools, and federal assimilation policy is still not over. Entire social, cultural, subsistence, and ceremonial institutions were repressed, eradicated, or decimated, and no structural equivalent was substituted. In this regard, the drastic increase in the burglary rate is a very important cultural indicator for the Makah Tribe. According to the most traditional elders, many of whom have died since the 1999 hunt, the worst thing a Makah could do was to become a thief. Thievery has surfaced in response to the demands of drug and alcohol habits.

Continuation of the Makah whale hunt provides the Makah Tribe with a reliable mechanism to repair the damage done to social structures and spiritual networks during the years of forced assimilation. The important ceremonial obligations associated with whale hunts will be widespread, because spiritual preparation affects the whaling crew members and their respective family members. Now that a quarter 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. 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). Thievery and substance abuse could be reduced if rigorous ritual preparation were again a part of the daily life of Makahs. There is far more at stake for the Makah Tribe than just subsistence benefits.

The youngest generation of Makahs is most severely impacted by the lack of an established, regular whale hunting season. Makah children under 13 years of age have never experienced any of the direct benefits that a whale hunt provided, since none were alive in 1999.

The 2011 Household Whaling Survey (HWS III)

The Makah Tribal Council commissioned a third 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 or the delay in whaling has on the Makah community. In order to maintain consistency, HWS III used the same methodology as that in HWS II, with three slight modifications in the questionnaire. The HWS III and an explanation of the methodology are attached as Appendix 1 and Appendix 2, respectively,

First, the HWS III questionnaire reintroduced the section which asked for information about respondents' activities on and around the date of the successful whale hunt in 1999. Second, the question, "Were you or another household member interviewed during the 2006 HWS?" was added. Third, the HWS III survey asked respondents about the illegal 2007 attempt to take a whale, and collected opinions about this event.

The HWS III tabulation indicated that 100% of the 170 randomly selected respondents were Makah tribal members living on the Makah Reservation. 45.9% were male, 41.8% were female[6], and 12.4% had no gender indicated on the instrument. 64.7% of respondents indicated that they were not interviewed for the HWS II. 100% of respondents considered themselves to be active members of the Makah community.

67.6% of the respondents had other Makahs living in their households, which provided data about whaling activities and food choices for an additional 296 Makahs.

Once again, the responses to question 18, "Should the Tribe continue to hunt whale?" demonstrate that an overwhelming majority of respondents (94.1%) support the continuation of the Makah Tribe's efforts to hunt whales. While 1.8% of respondents provided no response to this question, only 3.5% of respondents categorized their response to this question as "no". 85.2% of

[6] In 12.3% of the surveys, the gender of the respondent was not indicated. No other survey item contained a similar omission.

respondents perceived whaling as a positive thing for the Makah Tribe, and 90.6% wanted increased access to whale products in their household. These results are interesting in comparison to the 2006 and 2001 results.

In 2006, 88.8% of respondents supported the continuation of the Makah Tribe's whale hunt, with 7.2% unsure of their feelings, and 3.95% against the hunt. 79.6% viewed the whale hunt as a positive force for the Tribe, and 80.2% wanted increased access to whale products in their household. It was interesting to note that one respondent who objected to the hunt wanted increased access to whale products in his household.

The population surveyed in 2001 was 95.6% supportive of whaling efforts. 3.1% were opposed to the continuation of the Makah whale hunt, with 1.3% unsure of their feelings. 96.2% of these respondents thought whaling had a positive impact on the Tribe, compared to 0.6% who responded in the negative. 3.1% of respondents were unsure about whether whale hunt was positive or negative for the Makah Tribe. 91.2% of respondents wanted increased access to whale products in their households.

Note that the percentage of respondents supporting the Makah whale hunt has ranged from more than 88% in 2006 to more than 94% in 2011. In contrast, the percentage of Makahs against the whale hunt has stayed between 3% and 4% since the first HWS in 2001.

The 2011 survey gives respondents an opportunity to provide open-ended opinions to clarify their responses to question 18, "Should the Tribe continue to hunt whale?", question 21, "Do you think whale hunting has been a positive thing for the Tribe?", and question 23, "would you like to have more access to whale products in the future?". Some respondents provided more than one reason for one or more of these categories.

For question 18, the vast majority of respondents who approved of the Tribe's efforts to continue whaling cited the integral nature of whaling to either Makah culture in general or the Treaty of Neah Bay in particular (94.1%), or cited a healthier diet and a sustainable resource (24.7%). For the six respondents who did not think whaling should be continued, two did not believe the need or tradition was current, two cited a concern about waste, and one thought controls were lacking. The sixth respondent in this category actually wanted whaling to stay part of the Treaty, but expressed concerns about the "touchy" nature of the subject.

In response to question 21, the vast majority categorized whaling as a positive thing for the Tribe (85.2%). 7.1% did not think whaling had been positive. 83.3% of these respondents cited negative factors like the racism and politics of non-Makahs as their reason for thinking whaling was negative, rather than citing a factor that had to do with the process of whaling or the outcome of a hunt. Of those that provided an affirmative response, 91.8% viewed the whale hunt as a unifying factor that maintains the Makah culture and improves the quality of life on the reservation. Three respondents provided opinions for both a negative and a positive response, and 5.9% of respondents offered no response to the question, in part because they could see both negative and positive points. This phenomenon was observed in the 2006 HWS II as well.

The responses to question 23, which asked a respondent why he or she did or did not want more access to whale products, provided responses which correlated to the fitness and wellness movement on the reservation. The Tribe recently constructed a new gym and a fitness center on the reservation, and created a Health and Wellness program within the clinic serving the reservation population. 62.9% of respondents who wanted increased amounts of whale products related their opinion to healthy foods and/or a healthy lifestyle, as opposed to a cultural reason for wanting whale foods (33.0%).

In terms of whale products, the Makah respondents indicated that 74.1% would like whale oil on a regular basis, and 80.6% would like whale meat. 71.2% of respondents wanted access to whale bone, and 60.6% wanted whale blubber in their homes on a regular basis. 70.6% of respondents indicated 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 or prepare it in some fashion. 43.5% had an interest in raw blubber.

Survey respondents showed a strong interest in obtaining more information about preparing whale products. 73.2% wanted knowledge about how to cook whale meat, and 61.1% wanted butchering information as well. 72.4% requested information about smoking whale meat, while 63.5% wanted to learn how to clean whale bone. Each of these responses showed an increase in interest since the last HWS II. The community has an increased interest in learning to use the whale resource properly and efficiently when another hunt is successful.

The HWS III attests that health and fitness join the ceremonial priorities of the Makah Tribe when incorporating the whale hunt into the standard life of a majority of Tribal members. Even when the Tribe is prevented from hunting because of outside legal struggles, a significant majority of Makahs eagerly anticipate the restoration of the hunt into daily life.

IV. WHALE HUNTING AND THE MAKAH TRIBE: THE NUTRITIONAL 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 marine 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 overstated.

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 1870).

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 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 (1860, 1870) 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. When Makahs added processed foods to their diet during the historic period, the custom of using whale oil to flavor food remained intact. As James Swan observed, "all their other food is usually greased with a plentiful supply of whale oil" (Swan 1860: 76).

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).

Blubber's importance in both pre-contact and early historic times was not limited to being a source 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[7] 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.

During the time when whale hunting was not an option, Makahs compensated by increasing their reliance on other reliable and abundant subsistence foods. Despite 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, 1993), despite the decreasing and highly variable abundance described previously.

Investigations focusing on the subsistence practices of the Makah Tribe in forest areas (Renker 1994) and the intertidal zone (Renker 1993a) 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.

[7] Archaeological research continues in this area. Recent excavations suggest that Makah subsistence use of whales began more than 2,000 years ago (Wessen 2012).

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 1993b: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 seasonal needs 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. 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). In addition, the interdisciplinary approach termed food studies investigates the “relationships between food and the human experience”(Miller and Deutsch 2009:3)from a combined approach which emphasizes the use of method and theory from social sciences as well as the quantitative methods of the nutrition sciences (Miller and Deutsch 2009:101). 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 of the least healthy populations living within the United States of America; this observation is especially true for natives living within the confines of a reservation. For reservation residents, the infant mortality rate is highest and life expectancy rate is lowest when compared to all American citizens (Indian Health Service: 2011).

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. American Indians and Alaska Natives die from diabetes at a rate that is 177% higher than other Americans (Indian Health Service: 2011). As a matter of fact,

“American Indians have the highest rates of diabetes in the world” (National Institutes of Health 1996:26). Approximately 16% of the American Indian population in the lower 48 states has been diagnosed with diabetes, compared to 8% of all other racial groups. According to the National Institutes of Health, Alaska Natives are an exception with a diabetes rate of 5.5% (2011), lower than the rate for average Americans. Discussion later in this section points to their consumption of polyunsaturated fatty acids (PUFAs), which can be 6.8 times higher than the average American (Parkinson, Cruz, et al. 1994).

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 1996).

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 had a dramatic negative effect on the health of American Tribal members in general. Many of these foods were distributed to reservation communities 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 people to a variety of health problems (Hildes 1966:501, Keenleyside 1988:13, Brand, Snow, et al. 1990, National Institutes of Health 1996, Dewaily, et al. 2001, Dewaily, 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, the Office of Minority Health, 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. Beginning in 1983, nutrigenomic studies investigated large Pima families over several generations, which resulted in the 1993 identification of FABP2, a gene that may contribute to insulin resistance (DeMouy 2002:3).

Thirty years of concerted studies with the Pima people have yielded 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 (Brand, Snow, et al. 1990, National Institutes of Health 1996:6). These variations may explain why Pima people who consume 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, Dewaily, et al. 2002, Dewaily et al. 2001). Carpentier, et al., credits an early study of Greenlandic Westcoast Eskimos (Bang, et al. 1971) for first indicating 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 (Boucher, Burden et al. 2011, 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 serious health problems within the Makah community, and may provide researchers with an analogous study situation to the Pima community.

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. The existence of traditional reciprocal food networks can only make this adjustment easier.

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 (Villegas, et al. 2011, Ordovas 2006, Dewailly et al. 2002, Dewailly et al. 2001). Consequently, it is reasonable to conclude that increasing the consumption of locally available foods consumed through the millennia could confer substantial health benefits.

To encourage Makahs to revive ancient, healthier food traditions, the Makah Tribe has invested considerable resources to establish a Wellness Center on the reservation. Created in 2010, the Wellness Center is associated with the Tribe’s Indian Health Service Clinic, and offers a variety of medicinal and nutritional approaches to improved health. Traditional Makah approaches to health and wellness are provided to the community via a monthly newsletter, which collaborates with the Makah Museum. Ancient recipes for seafood preparation, as well as information for younger generations about the medicinal uses of

local plants, shellfish, and other seafood, is reaching a larger and more receptive audience every month. For example, the use of sea urchins as a palliative for rheumatoid arthritis (Renker 1993a), and the use of crabapple bark to reduce fevers (Gill 1983), is once again becoming daily practice for many Makah families.

The Tribe calculates its need for up to five whales per year based on the five traditional Makah villages that were consolidated on the Makah Reservation. Since Treaty times, the Makah Tribe has always represented itself as a nation that began as five villages, and the Tribe's request honors this tradition, asking for one whale per village.

However, it is also possible to consider the Tribe's needs in terms of the amount of whale meat, blubber and oil that would be utilized by tribal members. 80.6% of respondents in the HWS III expressed a desire for whale meat on a regular basis. There are 1,121 enrolled Makahs living on the Reservation. The HWS III results suggest that over 900 Makahs would utilize whale meat on a regular basis, without accounting for the needs of Makahs living off of the Reservation, or for the needs of non-Makah members of on-Reservation tribal households.

According to the United States Department of Agriculture (USDA), the average American consumes approximately 113.5 pounds of red meat (mainly pork and beef) per capita per year (2002: 15), as well as large amounts of chicken. Even if Makahs already consume less red meat and chicken than the average American, they could undoubtedly substitute significant quantities of whale meat for these foods, with significant health (and economic) benefits. (The health benefits that would follow from this change in diet are discussed above, and would likely include a reduction in diet-related diseases linked to red meat consumption, such as obesity, heart disease, and diabetes. In addition, Makahs would benefit from fewer genetically engineered and cloned animal products in their diet (Physicians for Social Responsibility: 2009). The economic benefits that would result from this change in diet would result from the avoided costs of purchasing red meat and chicken.)

The HWS III also demonstrated that 74.1% of respondents desired whale oil, and 60.6% desired whale blubber in their homes on a regular basis. This translates to 830 Makahs who would utilize whale oil on a regular basis and 680 Makahs who would utilize whale blubber on a regular basis, again without accounting for

the needs of Makahs living off of the Reservation, or for the needs of non-Makah members of on-Reservation tribal households.

The USDA estimates that the average American consumes 12.8 pounds of “table spreads” (butter and margarine) each year (2002: 17). Americans also consume nearly three times that amount of salad and cooking oils. This suggests that Makahs could substitute significant quantities of whale products (here, oil and blubber) for existing foods, with significant health (and economic) benefits. (The health benefits that would result from an increase in consumption of healthy PUFAs and Omega 3 fatty acids and a reduction in saturated fats have already been discussed.) Moreover, considering the HWS III responses, whale oil could return as a Makah staple in its traditional role for dipping dry foods, such as bread, potatoes and dried fish, and in modern formulations such as homemade salad dressing. Thus, it is likely that Makahs would consume more whale oil per capita than the average American consumption of unhealthy “table spreads.”

These data support the Tribe’s need for up to five whales per year (with an average of up to four). The Tribe recognizes that the amount of edible meat, blubber and oil that will be derived from each whale cannot be determined precisely because of the variability in the gray whale population. Factors such as size, age, sex, migratory season, and health of the animal all contribute to a wide range in the quantity of edible products that can be obtained from a harvested whale.

Huelsbeck (1994: 295) estimates that 25% of the weight of a gray whale could be utilized as edible meat and another 25% could produce consumable blubber, which could be rendered into oil. Rice and Wolman (1971: 36) measured the meat and oil yield of both southbound and northbound gray whales. After spending the summer on the Arctic feeding grounds, southbound whales weighed substantially more than northbound whales, which had spent the winter away from the feeding grounds (on average, southbound whales weighed 31.6 metric tons compared to 12.8 metric tons for northbound whales).

The northbound whale harvested by the Tribe in 1999 was estimated to weigh 5-7 metric tons, and the Chukotka people report that the average weight of the gray whales they harvest is around 9 metric tons. Using an estimate of 8 metric tons (17,637 pounds) per harvested whale, Rice and Wolman’s and

Huelsbeck's data suggest a yield of 2,099 to 4,409 pounds of meat and 3,422 to 4,409 pounds of blubber or oil per whale.[8]

With a projected 900 Makahs utilizing whale meat on a regular basis, this results in approximately two to five pounds of meat per person per whale (eight to twenty pounds of meat per person per year if four whales are harvested on average). With a projected 830 Makahs utilizing whale oil or blubber, these yield figures translate to four to five pounds of blubber per person per whale (16 to 20 pounds per person per year if four whales are harvested on average) and a somewhat smaller amount of whale oil after rendering. As noted above, this does not account for the needs of Makahs living off of the Reservation, or of non-Makah members of on-Reservation tribal households. Given the average consumption figures for red meat, "table spreads," and other oils, these data provide further support for the Makahs' need to take an average of four whales per year. Even if the Tribe harvested larger whales, the yield of edible meat and blubber would only replace some of red meat and fats consumed by the average American.

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 vestiges of the cultural suppression and social disruption that affected the Tribe during the assimilation period.

The availability of whale products will help to replace other subsistence resources which fluctuate in abundance. As traditional reciprocal networks change, the availability of whale products will reduce the need for Makahs to spend precious cash to replace current subsistence foods with non-traditional foods. In addition to preserving the limited financial resources of the Makah community, regular access to whale products from up to five whales per year will, as discussed above, help the Tribe return to the nutritious, marine-based diet on which their ancestors had long depended and thrived.

[8] Because rendering of blubber into oil may lead to evaporation of water, Rice and Wolman (1971: 35) suggested that the resulting oil may weigh less than the raw blubber.

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

CONFIDENTIAL HOUSEHOLD WHALING SURVEY

This survey is commissioned and sanctioned by the Makah Tribal Council, and administered by the Makah Cultural and Research Center. The data from this survey will be used in creating the 2012 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 placed 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 2006 household whaling survey?

Yes _____ No _____ Don't know or remember_____

ABOUT YOUR MAKAH HOUSEHOLD MEMBERS AND WHALING IN 1999….

5. Were you watching television when the 1999 whale was harpooned and killed?
Yes _____ No _____

6. Were any of your Makah household members watching TV when the 1999 whale was harpooned and killed?
Yes _____ No _____

7. If yes, how many Makah household members were watching TV when the 1999 whale was harpooned and killed? _____

8. Were you on Front Beach, or in a boat/canoe on the water, when the 1999 whale was brought ashore?
Yes _____ No _____

9. Were any of your Makah household members on Front Beach or in a boat/canoe on the water, when the 1999 whale was brought ashore?
Yes _____ No _____

10. Did you participate (in any way) in the May 22nd, 1999, tribal dinner which celebrated the successful whale hunt?

Yes _____ No _____

11. Did any members of your household participate (in any way) in the May 22nd, 1999, tribal dinner which celebrated the successful whale hunt?

Yes _____ No _____

ABOUT YOUR MAKAH HOUSEHOLD AND OTHER WHALING ACTIVITIES…

12. Would you like to have whale oil in your household on a regular basis?

Yes _____ No _____

13. Would you like to have whale meat in your household on a regular basis?

Yes _____ No _____

14. Would you like to have whale blubber in your household on a regular basis?

Yes _____ No _____

15. Would you like to have whale bone in your household on a regular basis?

Yes _____ No _____

16. 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 _____

Learning information about whaling _____

Other (Please specify.) _____

17. 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						
Learning information about whaling						
Other (Please specify.)						

ABOUT YOUR OPINIONS REGARDING WHALE HUNTING…

18. Should the Tribe continue to hunt whale? Yes __ No _____

19. What are the reasons for your answer?

20. Are you familiar with the 2007 attempt to take a whale?

Yes ____ No _____

20a. If yes, How did you feel about this attempt?

21. Do you think whale hunting has been a positive thing for the Tribe? Yes _____ No _____

21a. What are your reasons for this answer?

22. Do you think the delay in the Tribe's ability to hunt whales has affected tribal members? Yes _____ No _____

22a. Complete the sentence with one of the two responses. The effect of the whaling delay on the Makah Tribe is:
negative_____
positive_____

22b. What are the reasons for your answer?

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

Yes _____ No _____

23a. What are the reasons for your answer?

If yes to 23, go to 24. If no, go to 25.

24. 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) _____

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

Whale hunting (general information) _____

Whale hunting (participation) _____

Cooking whale meat _____

Butchering whale _____

Rendering oil _____

Smoking meat _____

Cleaning whalebone _____

Carving whalebone _____

Other (Specify) _____

26. Are you familiar with the legal issues that surround Makah whaling?

Yes _____ No _____

26a. How long have you been following the Makah Tribe's efforts to restore the treaty right of whale hunting? (Check one.)

Not at all _____
Less than one year _____
Less than four years _____
Since the 2007 quota was granted _____
Since the 2002 quota was granted _____
Since the 1997 quota was granted _____
Before the 1997 quota was granted _____
Other _____

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

APPENDIX 2

MAKAH HOUSEHOLD WHALING SURVEY METHODOLOGY

The survey was administered by the Makah Cultural and Research Center, an institution with thirty-one years of experience conducting household surveys on the Makah Reservation, including the 2001 and 2006 Household Whaling Surveys (HWS). The 2011 survey instrument is a modification of the 2006 Household Whaling Survey (HWS) instrument. Each of these HWSs employed the same methodology to promote reliability. The tabulation and analysis of all three were conducted by Ann M. Renker, PhD, an anthropologist with thirty-one years of research and household survey experience on the Makah Reservation.

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

1) Names of 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. 35.6% of the Tribe's 478 Makah households were interviewed.

2) All surveys were conducted in person by an enrolled Makah trained in proper survey procedures. These surveyors insured all respondents that confidentiality would be protected. One of the surveyors worked on all three HWS projects.

3) The survey team interviewed 170 Makah respondents.

4) All survey respondents had to be enrolled Makahs living in 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. Consequently, the 2011 HWS reports on the whaling activities of 170 respondents and 296 household members for a total population of 466.

5) All surveys were numbered to protect confidentiality. A master list which related each household's exclusive number was kept at the Makah Cultural and Research Center to avoid duplication and protect confidentiality. 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.

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

7) Certain questions allowed for multiple responses. Others did not. In addition, certain questions directed only the respondents who had answered a previous question a particular way to answer that question. On the tabulation sheet, the base number of respondents is indicated by R= . R=170 means that the percentage is calculated based on the answers of 170 respondents. The code MR indicates multiple responses were possible.

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

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

10) The large percentage of NR in questions 12, 14, and 15 actually reflect no response indicated on ten surveys even though this category was not offered on the instrument. These surveys also showed only the “yes” option checked by the surveyor. For interpretation purposes, it is more likely that the “no response” option is indicative of a negative response.

11. In the tabulation, a percentage is listed first. The actual number of responses is listed in parenthesis after the percentage.

12. In question 2, a NO response indicates that the only Makah in the household is the respondent.

13. Open-ended questions provided respondents with the opportunity to provide individual comments and responses. For tabulation purposes, similar responses were clustered together, and a threshold of 5% was used when reporting these responses. Responses with fewer than 5% frequency were not reported individually and were grouped in a general category called “other” or “responses”. The threshold was not applied to comments made in response to question 27. A parenthetical number following a comment indicates the number of respondents making the same comment.

14. Codes that appear in the tabulation include:
NR – No response
? - Unsure
HH – household
MWC – Makah Whaling Commission
MTC – Makah Tribal Council
EIS – Environmental Impact Statement
IWC – International Whaling Commission
MMPA – Marine Mammal Protection Act

REFERENCES CITED

ARCIA = Annual Reports to the Commissioner of Indian Affairs
1849-1889 Annual Reports to the Secretary of the Interior. Washington: U.S. Government Printing Office.

Anderson, Raoul, and Cato Wadel
1972 Comparative problems in Fishing Adaptations. In North Atlantic Fisherman: anthropological Essays on Modern Fishing. Anderson and Wadel, eds. Newfoundland Social and Economic Papers, No. 5. Institute of Social and Economic Research. Memorial University of Newfoundland. Toronto: University of Toronto Press.

Arima, Eugene
1983 West Coast People: The Nootka of Vancouver Island and Cape Flattery. British Columbia Provincial Museum Special Publication No. 6. British Columbia Provincial Museum: Victoria.
1988 Notes on Nootkan Sea Mammal Hunting. Arctic Anthropology 25:16-27.
1990 Nootkans of Vancouver Island. Pp. 391-411 in the Handbook of North American Indians, Vol. 7. The Northwest Coast. Wayne Suttles, volume ed., William C. Sturtevant, General ed. Smithsonian Institution: Washington.

Bang Ho, J. Dyerberg, and Ab Nielsen.
1971 Plasma lipid and lipoprotein pattern in Greenlandic West-Coast Eskimos. Lancet i: 1143-1146.

Barker, James T. comp.
1954 Treaties, Statutes, Executive Orders Having Particular Reference to the Makah Indian Tribe, Neah Bay, WA. Manuscript in Makah Tribal Council Archive, Neah Bay, WA

Belch, J.J., D. Amsell, R. Madho, A. Dowd, and R.D. Sturrock
1988 Effects of Altering Dietary Essential Fatty Acids on Requirements for Non-steroidal Anti-inflammatory Drugs in Patients with Rheumatoid Arthritis—A Double Blind Placebo Controlled Study. Annals of Rheumatic Disease 47: 96-104.

Bohannan, Paul
1963 Social Anthropology. New York: Holt, Rinehart and Winston.

Boucher, Olivier, Matthew J. Burden, Gina Muckle, Dave Saint-Amour,Pierre Ayotte, Eric Dewailly, Charles A. Nelson, Sandra W. Jacobsen, and Joseph L. Jacobsen.
2011 Neurophysiologic and Neurobehavioral Evidence of Beneficial Effects of Prenatal Omega-3 Fatty Acid Intake on Memory Function at School Age. American Journal of Clinical Nutrition 93: 1025-1037.

Boyd, Robert T.
1990 Demographic History, 1774-1874. Pp. 135-148 in The Handbook of North American Indians, Vol. 7. The Northwest Coast. Wayne Suttles, Volume ed., William C. Sturtevant, General ed. Smithsonian Institution: Washington.

Brand, Janette, B. Janelle Snow, Gary P. Nabhan, and Stewart Truswell
1990 Plasma Glucose and Insuklin Responses to Traditional Pima Indian Meals. American Journal of Clinical Nutrition 51: 416-420.

Breslow, Jan L.
2006 n-3 Fatty Acids and Cardiovascular Disease. American Journal of Clinical Nutrition 83: 1477S-1482S.

Broderson, Paul and C.J. Hopkins
1939 Pelagic Seal Hunting as Carried on by the Makah and Quileute Indians of Washington. Indians at Work 6(7):12-16. Washington.

Carpentier, Yvon, Laurence Portois and Willy J. Malaisse
2006 n-3 Fatty Acids and the Metabolic Syndrome. American Journal of Clinical Nutrition 83(6): S1499-1540S.

Cavanaugh, Deborah
1983 Northwest Coast Whaling: A New Perspective. M.A. Thesis, Department of Anthropology and Sociology, University of British Columbia, Vancouver.

Census Information from the United States Census Bureau
2000 Census 2000 http://www.census.gov/
2007 Economic Census Information. http://factfinder2.census.gov
2010 Census 2010. http://2010.census.gov/2010census/popmap/

Clallam County Economic Development Council
2005 2005 Community Profile.www.clallam.org

Colson, Elizabeth
1953 The Makah Indians: A Study of an Indian Tribe in Modern American Society. Minneapolis: University of Minnesota Press. (Reprinted Greenwood Press, Westport, CT 1974.)

Cote' Charlotte
2010 Spirits of Our Whaling Ancestors: revitalizing Makah and Nuu-chah-nulth Traditions. Seattle and London: University of Washington Press.

Curtis, Edward
1907-1930 The North American Indian: Being a Series of Volumes Picturing and Describing Indians of the United States, the Dominion of Canada, and Alaska. Frederick W. Hodge, ed. 20 vols. Norwood, Mass: Plimpton Press. (Reprinted: Johnson Reprint, New York, 1970.)

Deloria, Vine
1973 God is Red. Laurel Press: New York.

DeMouy, Jane
2002 The Pima Indians and Genetic Research. National Institutes of Health. http://diabetes.niddk.nih.gov/dm/pubs/pima/genetic/genetic.htm

Densmore, Frances
1939 Nootka and Quileute Music. Bureau of American Ethnology Bulletin Washington. (Reprinted: da Capo Press, New York, 1972.)

Dewailly, Eric, Carole Blanchet, Simone Lemieux, Louise Sauve, Suzanne Gingras, Pierre Ayotte, and Bruce John Holub
2001 n-3 Fatty Acids and Cardiovascular Disease Risk Factors among the Inuit of Nunavik. American Journal of Clinical Nutrition 74: 464-473.

Dewailly, Eric, Carole Blanchet, Simone Lemieux, Louise Sauve, Suzanne Gingras, Jean Bergeron, and Bruce John Holub
2001a Relations between n-3 Fatty Acids Status and Cardiovascular Disease Risk among Quebecers. American Journal of Clinical Nutrition 74:603-611.

Dewailly, Eric, Carole Blanchet, Suzanne Gingras, Simone Lemieux, and Bruce John Holub
2002 Cardiovascular Disease Risk Factors and n-3 Fatty Acid Status in the Adult Population of James Bay Cree. American Journal of Clinical Nutrition 76: 85-92.

Dewhirst, John
1978 Nootka Sound: A 4,000 Year Perspective. Sound Heritage 7 (2): 1-29. Victoria: Provincial Archives of British Columbia.

Driver, Harold E.
1961 The Indians of North America. Chicago: University of Chicago Press.

Drucker, Philip
1951 The Northern and Central Nootkan Tribes. Bureau of American Ethnology Bulletin 144. Washington.
1955 Indians of the Northwest Coast. Garden City, NY: Natural History Press (Reprinted in 1963.)

Dyerberg, J. and Bang Ho
1979 Hemostatic Function and Platelet Polyunsaturated Fatty Acids in Eskimos. Lancet 2: 433-435.

Ernst, Alice Henson
1952 The Wolf Ritual of the Northwest Coast. Eugene: University of Oregon Press. (Reprinted in 1980.)

Fisken, Marian
1980 Whale Bone Studies in Ozette Archaeological Project, Interim Final Report, Phase XIII, compiled by Paul Gleeson, pp. 62-65. Washington Archaeological Research Center, Project Report 97. Pullman: Washington State University.

Gibbs, George
1855 Treaty of Neah Bay [Transcript of Journal Proceedings]. (U.S. National Archives, Records Relating to the Negotiation of Ratified and Unratified Treaties with Various Tribes of Indians, 1801-1869; microcopy No. T-494, roll 5, Washington.
1877 Tribes of Western Washington and Northwestern Oregon. Contributions to North American Ethnology 1 (2):157-361. John Wesley Powell, ed. Washington: US Geographical Survey of the Rocky Mountain Region. (Reprinted: Shorey, Seattle, WA, 1970.)

Gill, Steven
1983 The Ethnobotany of the Makah and Ozette People, Olympic Peninsula, Washington. Ph.D. dissertation. Ann Arbor: University Microfilms.

Gillis, Alix J.
1974 History of the Neah Bay Agency. Pp. 91-115 in Coast Salish and Western Washington Indians III (American Indian Ethnohistory: Indians of the Northwest) 5 vols. New York: Garland.

Gunther, Erna
1936 A Preliminary Report on the Zoological Knowledge of the Makah. Pp. 105-118 in Essays in Anthropology Presented to A.L. Kroeber. Robert Lowie, ed. Berkley: University of California Press.
1942 Reminiscences of a Whaler's Wife. Pacific Northwest Quarterly 3 (1):65-69.
1945 Ethnobotany of Western Washington. University of Washington Publications in Anthropology 10(1). Seattle. (Reprinted: University of Washington Press, Seattle 1973.)
1962 Makah Marriage Patterns and Population Stability. Pp. 538-545 In Proceedings of the 34th International Congress of Americanists, Vienna, July 18-25, 1960.
1972 Life on the Northwest Coast of North America as Seen by The Early Traders and Explorers and Fur Traders During the Last Decades of the Eighteenth Century. Chicago: University of Chicago Press.

Hagelund, William
1987 Whalers No More: A History of Whaling on the West Coast. Madeira Park, B.C.: Harbour Publications.

Hall, Carl
1983 Makah Indian Reservation Statistical Information Guide. (Manuscript in Makah Tribal Council Planning Department, Neah Bay, WA.)

Hancock, Samuel
1927 The Narrative of Samuel Hancock, 1845-1860. New York: Robert McBride.

Healthy Youth Survey of Washington State
2010 http://www.hys.wa.gov/Agencies/Default.aspx

Hildes, J.A.
1966 The Circumpolar People—Health and Physiological Adaptations In the Biology of Human Adaptatibility. P.T. Baker and J.S. Weiner, eds. Pp. 497 - 508. Oxford: Clarendon Press.

Huelsbeck, David
1983 Mammals and Fish in the Subsistence Economy of Ozette. Ph.D. Dissertation. Washington State University, Pullman. University Microfilms International: Ann Arbor.
1983a The Utilization of Whales at Ozette. Report to Interagency Archaeological Services, National Park Service. Laboratory of Anthropology, Washington State University, Pullman.
1988 The Surplus Economy of the Central Northwest Coast. Pp. 147-177 in Prehistoric Economies of the Pacific Northwest Coast., Barry Isaac, ed. Supplement 3 of Research in Economic Anthropology. JAI Press: Greenwich, CT.
1988a Whaling in the Pre-contact Economy of the Central Northwest Coast. Arctic Anthropology 25: 1-15.
1988b The Economic and Ecological Context of Northwest Coast Whaling. Paper presented at the 53rd annual meeting of the Society for American Archaeology, Phoenix, AZ.
1994 Utilization of Whales at Ozette in Ozette Archaeological Project Research Reports, Volume II, Fauna. Reports of Investigations 66. Department of Anthropology, Washington State University, Pullman, and National Park Service, Pacific Northwest Regional Office, Seattle.
1995 Personal communication.

Income 2007
2007 Income of Households by State. US Census Bureau: Washington D.C.

Indian Health Service
1995 Trends in Indian Health. Washington, D.C.: Government Printing Office.
1996 Trends in Indian Health. Washington, D.C.: Government Printing Office.
1999 Trends in Indian Health. Washington, D.C.: Government Printing Office.
2009 2008 National Summary. Washington:GPO
2011 Indian Health Service Fact Sheet. http//www.ihs.gov/PublicAffairs/IHSBrochure/Disparities.asp

International Pacific Halibut Commission
1987 The Pacific Halibut: Biology, Fishery, and Management. Seattle: International Pacific Halibut Commission
1998 The Pacific Halibut: Biology, Fishery, and Management. Seattle: International Pacific Halibut Commission

International Whaling Commission
2003 Annual Report. http://iwcoffice.org/meetings/chair2003.htm

Jewitt, John R.
1812 A Narrative of the Adventures and Sufferings of John R. Jewitt Middletown, CT: Seth Richards.

Josephy, Alvin M.
1982 Now That the Buffalo's Gone. Knopf: New York.

Kappler, Charles J., comp
1904-1941 Indian Affairs:Laws and Treaties. 5 vols. Washington: U.S. Government Printing Office. (Reprinted:AMS Press, New York, 1971.)

Kaput J, J. Noble , B. Hatipoglu, K. Kohrs, K. Dawson, and A. Bartholomew
2007 Application of Nutrigenomic Concepts to Type 2 Diabetes Mellitus. Journal of Nutrition, Metabolism and Cardiovascular Diseases 17: 89-103.

Katz, William A., ed
1971 Almost Out of the World: Scenes in Washington Territory. Reprints of James G. Swan articles. Tacoma: Washington State Historical Society.

Keen, H., J. Payan, J. Walker, et al..
1993 Treatment of Diabetic Neuropathy with Gamma Linoleic Acid (GLA). Diabetes Care 16: 8-15.

Keenleyside, Ann
1988 Euro-American Whaling in the Canadian Arctic: Its Effects on Eskimo Health. Arctic Anthropology 27: 1-19.

Lane, Barbara
1972 Makah Economy Circa 1855 and the Makah Treaty—A Cultural Analysis. 51 pp. Western Washington University Anthropological Archive Collection, Bellingham, WA.
1973 Political and Economic Aspects of Indian-White Culture Contact in Western Washington in the Mid-19th Century: Makah

Economy." Ms. On file in the Makah Tribal Council Archives, Neah Bay, WA.

Laut, Agnes C.
1928 Who Wants a Whale Steak? The Exciting Enterprise of Catching Whale. Mentor (September 1928): 33-35.

Leap, William
1977 Maritime Subsistence in Anthropological Perspective: A Statement of Priorities in Those Who Live from the Sea: A Study in Maritime Anthropology. M. Estellie Smith, ed. Monograph 62, The American Ethnological Society. Pp251-261. New York: West Publishing.

Marr, Carolyn
1987 Portrait in Time: Photographs of the Makah by Samuel G. Morse, 1896-1903. Allied Printers: Seattle.

Makah Financial and Harvest Information
2007 Office and Departmental Personnel
2012 Office and Departmental Personnel

Makah Fisheries Management Program
2007 Five Year Strategic Plan (2007-2011). On file in Makah Fisheries Management Office, Neah Bay, Wa.
2007 Information related to harvest and finances.
2012 Annual report for 2011. On file in Makah Fisheries Management Office, Neah Bay, Wa.
2012 Information related to harvest and finances.

Makah Language Program
1981-1991 Makah Public School Curriculum. (Curriculum on file, Makah Archives, Makah Cultural and Research Center, Neah Bay, WA.

Makah Tribal Council Planning Office
1988 Community Survey on Resource Planning and Economic Development. Survey in Makah Tribal Council Planning Department, Neah Bay, WA.
2002 Profile of General Demographic Characteristics: 2000
2010 Profile of General Demographic Characteristics: 2000
2012 Annual reports for 2011

Makah Tribal Council Enrollment Office
2010 Enrollment Report.

Marino, Cesare
1990 History of Western Washington Since 1846. Pp. 169-179 in The Handbook of North American Indians, Vol. 7. The Northwest Coast. Wayne Suttles, volume ed., William C. Sturtevant, General ed. Smithsonian Institution.

Marker, Michael
2006 After the Whale Hunt: Indigenous Knowledge and Limits to Multicultural Discourse. Urban Education 41(5): 1-24.

Miller, Beatrice D.
1952 Makah in Transition. Pacific Northwest Quarterly 43(4): 262-272.

Miller, Jeff and Jonathan Deutsch
2009 Food Studies: An Introduction to Research Methods. Oxford and New York: Berg Publishers.

Monette, Willliam
2002 Personal Communication.

National Institutes of Health
1996 The Pima Indians: Pathfinders for Health. NIH Publication no. 95-3821. Washington D.C.: Government Printing Office.

Oldham, Kit
2003 Makah Whaling on HistoryLink.org
http://www.historylink.org/index.cfm?DisplayPage=output.cfm&File_Id=5301

Ommanney, F.D.
1971 Lost Leviathan. Dodd, Mead and Company: New York.

Ordovas, Jose M.
2006 Genetic Interactions with Diet Influence the Risk of Cardiovascular Disease. American Journal of Clinical Nutrition 83S: 443S-446S.

Pamplin, Nathan
2003-2006 Annual Reports to the Makah Tribal Council. On file at Makah Fisheries Management Office.

Parkinson, Alan, Aurea L. Cruz, William I. Heyward, Lisa R. Bulkow, David Hall, Louise Barstaed, and William E. Connor

1994 Elevated Concentrations of plasma w-3 Polyunsaturated Fatty Acids among Alaskan Eskimos. American Journal of Clinical Nutrition 59: 384-388.

Pascua, Maria Parker
1991 Ozette. National Geographic 180(4):38-53.

Pelto, Gretel
1989 Introduction: Methodological Directions in Nutritional Anthropology In Research Methods in Nutritional Anthropology. Pp ix – xv. Tokyo: United Nations University.

Peterson, Joe
2012 Personal communication

Physicians for Social Responsibility
2009 U.S. Meat Production. www.psr.org/chapters/oregon/safe-food/industrial-meat-system

Population 2000
1999 Profile of US Population by Geographic Area. US Census Bureau: Washington, D.C.
2010 Profile of US Population by Geographic Area. US Census Bureau: Washington, D.C.

Powell, W.
1888 Report of the Neah Bay Agency. Commissioner of Indian Affairs Report for 1888. Washington, D.C.: Government Printing Office.

Reagan, Albert
1925 Whaling of the Olympic Peninsula Indians of Washington. Natural History 25:24-32.

Renker, Ann M.
1980 The Makah Language Survey. (Manuscript in Makah Archives, Makah Cultural and Research Center, Neah Bay, WA.)
1985 The Makah Language Survey II. (Manuscript in Makah) Archives, Makah Cultural and Research Center, Neah Bay, WA.)
1987 Rethinking Noun and Verb: An Investigation of AUX in a Southern Wakashan Language. Ph.D. Dissertation. The American University, Washington. University Microfilms International: Ann Arbor.
1988 The 1988 Reservation Household Fishing Survey. Ms. on file in the Makah Cultural and Research Center Archives.
1993a Expert Testimony: Shellfish Use in Makah Usual and Accustomed Places. US. Vs. Washington, Part II.

1993b The Makah Forest Practices Study. National Park Service.
1994 The Makah in the Reference Encyclopedia of Native Americans in the 20th Century. New York: Garland Press.
2000 The People of the Sea and the Forest. Study Essay for the University of Washington Pacific Northwest Indian Collection from Suzzalo Library. Library of Congress: American Memory website.
2001 The Makah Household Whaling Survey. Manuscript on file at the Makah Tribal Council Archives. Neah Bay, WA.
2002 Whale Hunting and the Makah Tribe: A Needs Statement. International Whaling Commission, Exhibit 54ASW5. Shimonoseki, Japan.
2006 The Makah Household Whaling Survey II. Manuscript on file at the Makah Tribal Council Archives. Neah Bay, WA.
2007 Whale Hunting and the Makah Tribe: A Needs Statement. International Whaling Commission, Exhibit 59ASW9. Anchorage, Alaska, USA.
2011 The Makah Household Whaling Survey III. Manuscript on file at the Makah Tribal Council Archives. Neah Bay, WA.
2012 Aboriginal or Indigenous Whaling in An Introduction to Marine Mammal Biology and Conservation by Chris Parsons. Burlington, Ma: Jones and Bartlett.

Renker, Ann M. and Greig W. Arnold
1988 Exploring the Role of Education in Cultural Resource Management: The Makah Cultural and Research Center Example. Human Organization 47(4):302-307.

Renker, Ann M. and Erna Gunther
1990 The Makah. Pp. 422-430 in The Handbook of North American Indians, Vol. 7. The Northwest Coast. Wayne Suttles, volume ed., William C. Sturtevant, General ed. Smithsonian Institution: Washington.

Renker, Ann M. and Maria Parker-Pascua
1989 The Makah Traditional Cultural Property Study. (Manuscript on file at the Washington State Office of Archaeology and Historic Preservation, Olympia, WA

Rice, D. W., and A. A. Wolman
1971 The life history and ecology of the gray whale, *Eschrichtius robustus*. Am. Soc. Mammal

Roghair, David L.
2005 *Anderson v. Evans*: Will Makah Whale Hunting Under the Treaty of Neah Bay Survive the Ninth Circuit's Application of

the MMMPA? Journal of Environmental Law and Litigation 20: 189-211.

Sapir, Edward and Morris Swadesh
1939 Nootka Texts: Tales and Ethnological Narratives, with Grammatical Notes and Lexical Materials. Philadelphia: Linguistic Society of America.
1955 Native Accounts of Nootka Ethnography. Indiana University. Research Center in Anthropology, Folklore and Linguistics Publications 1:1-457. Bloomington. (Reprinted: AMS Press, New York 1978.)

Scammon, Charles M.
1874 The Marine Mammals of the Northwestern Coast of North America. San Francisco: John H. Carmany. (Reprinted: Dover Publications, New York, 1968.)

Sepez, Jennifer
2001 Social and Political Ecology of Contemporary subsistence Hunting, Fishing, and Shellfish Collecting Practices of the Makah Tribe. PhD Dissertation, Department of Anthropology, University of Washington.

Simonopoulis, Artemis P.
1999 Essential Fatty Acids in Health and Chronic Disease. American Journal of Clinical Nutrition 3: 560S-569S.

Singh, Ram Raj Prasad
1966 Aboriginal Economic System of the Olympic Peninsula Indians, Western Washington. Sacramento Anthropological Society Papers 4. Sacramento, CA

Smith, A.W.
1853-1935 Collection of Letters and Documents. Suzzalo Library, University Of Washington, Seattle, WA.

Smith, M. Estellie
1977 Introduction in Those Who Live from the Sea: A Study in Maritime Anthropology. M. Estellie Smith, ed. Monograph 62, The American Ethnological Society. Pp 1-22.New York: West Publishing.

Stevens, L.J., S.S. Zentall, J.L. Deck, et al..
1995 Essential Fatty Acid Metabolism in Boys with Attention-Deficit Hyperactivity Disorder. American Journal of Clinical Nutrition 62: 761-768.

Stordy, Jacqueline
1995 Benefit of Docosahexaenoic Acid Supplements to Dark Adaptation In Dyslexics. Lancet, August 5, 1995.

Swan, James G.
1855 The Northwest Coast; or, Three Years' Residence in Washington Territory. New York: Harper.
1860 "Two Months with the Makahs. October 8th – November 27th, 1859". San Francisco Evening Bulletin, October 22, 1860. Reprinted in Almost Out of the World: Scenes in Washington Territory. William Katz,ed. Tacoma: Washington State Historical Society (1971).
1859-1866 [Unpublished Diaries.] In Manuscript Collection, Suzzallo Library, University of Washington, Seattle. Also available: http://content.lib.washington.edu/cdm4/document.php?CISOROOT=/pioneerlife&CISOPTR=2148&REC=2&CISOSHOW=2140
1870 Indians of Cape Flattery, at the Entrance to the Strait of Juan de Fuca, Washington Territory. Smithsonian Contributions to Knowledge 16(1):1-106. Washington. (Reprinted: Shorey Publications, Seattle, 1982.)
1884-1887 The Fur-seal Industry of Cape Flattery and Vicinity. Pp. 393-400In The Fisheries and Fishery Industries of the United States. George B. Goode, ed. 8 vols. In 7. Washington: U.S. Government Printing Office.

Swanson, Earl H.
1954 Nootka and the California Gray Whale. Pacific Northwest Quarterly 47:52-56.

Swindell, Edward G. Jr.
1942 Report on Source, nature, and Extent of the Fishing, Hunting, and Miscellaneous Related Rights of certain Indian Tribes in Washington and Oregon (etc.). Los Angeles: Department of the Interior, Office of Indian Affairs, Division of Forestry and Grazing.

Taylor, Herbert C.
1974 Anthropological Investigation of the Makah Indians; Relative to Tribal Identity and Aboriginal Possession of Lands. Pp. 27-89 in Coast Salish and Western Washington Indians, III. (American Indian Ethnohistory; Indians of the Northwest.) 5 vols. New York: Garland.

United States Department of Agriculture
2002 Profiling Food Consumption in America in Agriculture Factbook 2001-2002. www.usda.gov/factbook/chapter2.pdf

United States Fish Commission
1888 Annual Report. http://docs.lib.noaa.gov-rescue-Fish

Van Arsdell, Jon
1976 B.C. Whaling: The Indians. In Raincoast Chronicles, First Five: 20-28. Madiera Park, B.C.: Harbour Publishing.

Villegas, Raquel, Yong-Bing Xiang, Tom Elasy, Hong-Lan Li, Gong Yang, Hui Cai, Fei Ye, Yu-Tang Gao, Yu Shyr, Wei Zheng, and Xiao-Ou Shu
2011 Fish, shellfish, and Long Chain n-3 Fatty Acid Consumption and Risk of Incident Type 2 Diabetes in Middle-Aged Chinese Men and Women. American Journal of Clinical Nutrition 94: 543-51.

Walker, Ernest
1966 Mammals of the World, Volume 2. 2nd edition. JH Press: Baltimore.

Waterman, Thomas T.
1920 Whaling Equipment of the Makah Indians. University of Washington Publications in Anthropology 1(2). Seattle, WA
[1920a] [Puget Sound Geography.] (Manuscript No. 1864 in National Anthropological Archives, Smithsonian Institution, Washington.)

Webb, Robert Lloyd
1988 On the Northwest: Commercial Whaling in the Pacific Northwest 1790-1967. Vancouver: University of British Columbia Press.

Wein, Eleanor, Milton Freemen, and Jeanette Makus
1993 Use of and Preference for Traditional Foods among the Belcher Island Inuit. Arctic 49: 256-264.

Wessen, Gary
1982 Shell Midden as Cultural Deposits: A Case Study from Ozette. Ph.D. Dissertation. Washington State University, Pullman. University Microfilms International: Ann Arbor.
1990 Archaeology of the Ocean Coast of Washington. Pp. 412-420 in the Handbook of North American Indians, Vol. 7. The Northwest Coast. Wayne Suttles, volume Ed., William C. Sturtevant, General Ed. Smithsonian Institution: Washington.
1991 An Overview of the Archaeology and Archaeological Resources of Neah Bay, WA. Reports of Investigations, No. 2. Makah Cultural and Research Center, Neah Bay, WA.

1993 Reports, Maps and Exhibits presented as evidence for US v. Washington No. 9123.
2012 Personal communication.

White, T.E.
1953 A Method of Calculating the Dietary Percentage of Various Food Animals Utilized by Aboriginal Peoples. American Antiquity 18:396-398.

Whitner, Robert L.
1977 Cultural Conflict in the Agency School: An Introduction to a Case Study, the Neah Bay Reservation, 1861-1896. (Manuscript in Makah Archives, Makah Cultural and Research Center, Neah Bay WA.)
1984 Commercial Sealing, 1860-1897: A study in Acculturation and Conflict. Pp. 121-130 in Rendezvous: Selected Papers of the Fourth North American Fur Trade Conference, 1981. Thomas C. Buckley, ed. St. Paul, MN: North American Fur Trade Conference.

Wilcox, William
1895 The Fisheries of the Pacific Coast. In Report of the Commission For the Year Ending June 30, 1893 to the United States Commission of Fish and Fisheries. Washington, D.C.: GPO.

Wooley, Christopher B.
1983 A Reassessment of Westcoast (Nootka) Whaling. M.A. Thesis. Department of Anthropology, Washington State University. Pullman, WA.