FINAL
Environmental Assessment/ Overseas Environmental Assessment Dismantling of the Supercarrier Ex-RANGER (CV 61)

December 2014

Prepared by the
Department of the Navy
Naval Sea Systems Command

Environmental Assessment/Overseas Environmental Assessment for Dismantling of Supercarrier Ex-RANGER (CV 61)

ABSTRACT

The United States (U.S.) Department of the Navy (DON or "The Navy") has prepared this Environmental Assessment/Overseas Environmental Assessment (EA/OEA) to evaluate the potential environmental impacts of actions leading to the dismantling of the aircraft carrier ("Supercarrier") ex-RANGER (CV 61). The EA/OEA is required as a consequence of ex-RANGER being eligible for listing in the National Register of Historic Places (NRHP). The ship is currently berthed at the Naval Sea Systems Command (NAVSEA) Inactive Ships On-site Maintenance Office (INACTSHIPMAINTO) Bremerton, WA. The DON analyzed potential Proposed Action Alternative dismantling locations. Other options to dispose of ex-RANGER were considered but ultimately rejected. The DON also analyzed the No-Action Alternative.

The Proposed Action is the associated actions that would occur with the award of a delivery order for the dismantlement of ex-RANGER to one of three dismantling contractors located in Brownsville Navigation District, TX (hereinafter referred to as "Brownsville, TX" or "Brownsville") which are capable of dismantling a vessel the size of ex-RANGER. The Navy's dismantlement contract requires that the contractor tow ex-RANGER from its current location in Bremerton, WA, to the awardee's facility in Brownsville, and that the contractor dismantle and recycle her in accordance with all applicable Federal, state and local laws and regulations. The purpose for the proposed dismantlement of this vessel is to execute Chief of Naval Operations (CNO) policy for inactive ships stricken from the Naval Vessel Register and designated for disposal. The Proposed Action is needed to reduce the Navy's inactive ship inventory and eliminate costs associated with continuing to maintain the deteriorating ship in a safe stowage condition.

Ex-RANGER was decommissioned on July 10, 1993, after 36 years of service. Upon decommissioning, ex-RANGER was laid up for long-term preservation as a mobilization asset for possible future reactivation. She was subsequently stricken from the Naval Vessel Register (NVR) on March 8, 2004, and advertised for donation to a state or non-profit organization for use as a museum/memorial. However, no organization was able to meet the Navy's minimum requirements for ship donation. Ex-RANGER was removed from donation hold on September 26, 2012, and designated for dismantling.

This EA/OEA was prepared in accordance with the National Environmental Policy Act (NEPA) of 1969, 42 United States Code (U.S.C) §§4321-4370d, as implemented by the Council on Environmental Quality (CEQ) regulations, 40 *Code of Federal Regulations* (C.F.R.) Parts 1500-1508, Executive Order (E.O.) 12114-Environmental Effects Abroad of Major Federal Actions, and Policies and Responsibilities for Implementation of NEPA within the DON, 32 C.F.R. Part 775, and evaluates the potential effects of the Proposed Action on the following resource areas: cultural resources; water resources, biological resources, and air quality.

POINT OF CONTACT

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December 2014

EXECUTIVE SUMMARY

Introduction

This EA/OEA evaluates the potential environmental effects of actions leading to the dismantling of the aircraft carrier ex-RANGER (CV 61), berthed at the Naval Sea Systems Command (NAVSEA) Inactive Ships On-Site Maintenance Office (INACTSHIPMAINTO) Bremerton, Washington (WA). The Department of the Navy (DON, or "the Navy") has prepared this EA/OEA in accordance with the National Environmental Policy Act (NEPA) of 1969, as amended, 42 United States Code (U.S.C.) §§ 4321-4370d, as implemented by the Council on Environmental Quality (CEQ) regulations, 40 *Code of Federal Regulations* (C.F.R.) Parts 1500-1508, Executive Order (E.O.) 12114, Environmental Effects Abroad of Major Federal Actions, and the guidelines contained in the Chief of Naval Operations (CNO) Environmental Readiness Program Manual (OPNAV M-5090.1 January 10, 2014) which establishes procedures for environmental planning and compliance including implementation of the NEPA.

Purpose of and Need for the Proposed Action

The Proposed Action is the associated actions that would occur with the award of a delivery order for the dismantlement of ex-RANGER to one of three dismantling contractors located in Brownsville Navigation District, TX (hereinafter referred to as "Brownsville, TX" or "Brownsville") which are capable of dismantling a vessel the size of ex-RANGER. The Navy's dismantlement contract requires that the contractor tow ex-RANGER from its current location in Bremerton, WA, to the awardee's facility in Brownsville, and that the contractor dismantle and recycle her in accordance with all applicable Federal, state and local laws and regulations. Ex-RANGER was decommissioned on July 10, 1993, after 36 years of service. Upon decommissioning, ex-RANGER was laid up for long-term preservation as a mobilization asset for possible future reactivation. She was subsequently stricken from the Naval Vessel Register (NVR) on March 8, 2004, and advertised for donation to a state or non-profit organization for use as a museum/memorial. However, no organization was able to meet the Navy's minimum requirements for ship donation. Ex-RANGER was removed from donation hold on September 26, 2012, and designated for dismantling. There are no Navy requirements for the ship. The Proposed Action is needed to reduce the Navy's inactive ship inventory and eliminate costs associated with continuing to maintain the ship in a safe stowage condition.

Description of the Proposed Action

If the Navy decides to proceed with dismantling ex-RANGER, the Navy would solicit proposals from the three existing aircraft carrier dismantling Indefinite Delivery, Indefinite Quantity (IDIQ) contractors, then issue a delivery order under an existing aircraft carrier dismantling IDIQ contract to the offeror presenting the best value to the government. The delivery order would require towing ex-RANGER from her current location at INACTSHIPMAINTO Bremerton to the selected contractor's ship dismantling facility. To prepare for the proposed dismantlement, certain equipment and materials have been removed from ex-RANGER and reused on other vessels, thereby reusing previously committed resources.

The selected contractor would dispose of ex-RANGER by dismantling and recycling. The Navy's aircraft carrier dismantling contracts include a clause that requires the contractor to comply with all applicable Federal, state and local environmental and occupational safety and health laws and regulations. The dismantling/recycling would occur at an existing industrial facility that is capable of conducting ship dismantling in its normal course of business. Therefore, it is not anticipated that the contractor would need to obtain any additional regulatory permits in order to perform the requirements of the contract.

Three aircraft carrier dismantling IDIQ contracts with facilities located in Brownsville have already been awarded under a multiple award IDIQ contract, with a minimum quantity of one aircraft carrier for dismantling. Ex-RANGER would be the first follow-on delivery order, which would become the second aircraft carrier delivery order awarded to one of the three existing dismantling IDIQ contractors. If the Navy decides to implement the Proposed Action for ex-RANGER, construction of new facilities would not be required. However, some new or maintenance dredging may be needed to expand the length and width of an existing dismantling slip depending on which contractor is selected. Should any new or maintenance dredging be necessary, it would be conducted by the dismantling contractor in accordance with existing permits with the ACOE (ACOE, 2012). In addition to any past dredging, these permits also authorize a 10-year maintenance dredging program. The Navy has determined that this permitted dredging would be in compliance with Federal laws, and, as stated in the permits themselves, exempt from NEPA documentation.

The vessel is non-operational (no propeller rotation or water intakes/discharges); therefore, due to the size of the ship, the use of one or more assist tug boats would be required to move the vessel from storage berthing to a dismantling site. The NAVSEA aircraft carrier dismantling IDIQ contracts require that the towing be conducted by the selected contractor to meet Navy policy for safety, navigation, environmental, and other standards. Included in these requirements are the procedures in the National Marine Fisheries Service (NMFS) "Vessel Strike Avoidance Measures and Reporting for Mariners."

The dismantling facilities located in Brownsville are the only facilities that satisfy the Navy's contractual requirements for dismantling aircraft carriers. That is because these three contractors were selected as awardees under the overarching multiple award ISIQ and meet all of the management, facility and applicable security requirements under the contract. Therefore, the alternatives analysis in this EA/OEA is limited to potential environmental impacts associated with the Brownsville, TX, facility locations.

No-Action Alternative

The No-Action Alternative includes continuous berthing of ex-RANGER at INACTSHIPMAINTO Bremerton. If the vessel is not removed from the inactive ship inventory, INACTSHIPMAINTO Bremerton would continue to maintain the ship in safe stowage (i.e., fire and flooding protection). If the Federal Government is unable to award a delivery order for

dismantling of ex-RANGER, the No-Action Alternative would result by default. The No-Action Alternative does not meet the Proposed Action's purpose and need.

Alternatives Considered but Eliminated

In accordance with OPNAVINST 4770.5H, General Policy for the Inactivation, Retirement, and Disposition of U.S. Naval Vessels, there are six possible methods for the disposition of ships stricken from the NVR, one of which is dismantling. The following are five alternatives considered for ex-RANGER but ultimately eliminated from further consideration:

- Fleet Training Exercise Requirements:
  This alternative results in the sinking of the ship during at-sea, live-fire training exercises (SINKEX). Current policy does not include the use of aircraft carriers for SINKEX, thus this alternative is not an option for ex-RANGER.

- Foreign Military Sale Transfer:
  This alternative is not feasible as the U.S. Department of Defense (DoD) does not allow aircraft carriers to be available for Foreign Military Sale transfer, thus this alternative is not an option for ex-RANGER.

- Title Transfer to the Maritime Administration (MARAD), Department of Transportation (DOT):
  This alternative is only applicable to merchant-type ships such as amphibious and auxiliary ships, pursuant to the Merchant Marine Act of 1936. Because ex-RANGER is an aircraft carrier, this alternative is not available.

- Artificial Reefing:
  The Navy has determined that this alternative is not feasible due to the extensive presence of solid materials containing polychlorinated biphenyls (PCBs) at levels which exceed USEPA acceptable levels; consequently, ocean disposal by means of artificial reefing would be prohibited. Removal of these materials prior to artificial reefing of this vessel would not be practicable.

- Donation Transfer:
  Ex-RANGER was designated for donation as a museum or memorial for over eight years. That period of time exceeds both the mitigation requirements in the Navy Program Comment (ACHP, 2010) and Navy policy. During this period, no organization was able to meet the Navy's minimum requirements for ship donation. Due to the need to dispose of inactive vessels, the Navy cannot continue to berth ex-RANGER for an additional extended period in order to provide opportunity for an organization to develop a viable plan and obtain the necessary funding to convert ex-RANGER into a museum. Thus, this alternative is not an option for ex-RANGER.

Summary of Environmental Impacts

Under section 106 of the National Historic Preservation Act (NHPA), ex-RANGER is eligible for listing on the National Register of Historic Places (NRHP). Thus, her dismantling would result in an adverse effect on a cultural resource. However, the Navy's compliance with the Advisory Council on Historic Preservation's (ACHP) "Program Comment Pursuant to 36 C.F.R. § 800.14(e) Implementing section 106 of the National Historic Preservation Act for the Evaluation of Vessels for Eligibility for Listing in the National Register of Historic Places and the Treatment of Eligible Vessels to Resolve Adverse Effects that May Result from Certain Methods of Final Disposition" ("the Program Comment") would mitigate the adverse effect (see Appendix).

There are several Native American Indian Tribes with treaty rights along the transit to the Pacific Ocean, and along the coast. However, the Proposed Action would not change any Tribe's ability to exercise Tribal treaty rights to Usual and Accustomed Fishing areas. Thus, the Proposed Action would not result in any significant impacts to Tribal culture.

On July 8, 2014, pursuant to section 7(a)(2) of the Endangered Species Act, the Inactive Ships Office began informal programmatic consultation with the National Oceanic and Atmospheric Administration, NMFS, to evaluate the level of risk to biota that would be associated with towing inactive vessels through the waters of the United States and overseas. Prior to initiating consultation, the Navy's subject matter experts conducted research and prepared a biological evaluation on the impacts of towing inactive vessels and the potential injuries to whales and other biota from the tow. Tables 3-1 through 3-5 list Threatened and Endangered (T&E) species determined by the Navy to be present in the study area of the Proposed Action. These species may occur in Puget Sound, the Strait of Juan de Fuca, the Pacific Ocean, the Atlantic Ocean, the Gulf of Mexico, or the Brownsville Ship Channel for the Proposed Action. These tables include the marine mammal and sea turtle species for which the Navy engaged in informal consultation with NMFS. NMFS requested an addendum to the biological evaluation to provide additional analysis on the potential impacts of invasive biofouling organisms on the hulls of towed ships to certain ESA-listed coral species. This was prepared by the Navy's subject matter experts and provided to NMFS. On November 17, 2014, NMFS concurred with the Navy's finding that towing ex-RANGER may affect, but is not likely to adversely affect, listed threatened or endangered species or critical habitats designated under the Endangered Species Act (ESA) which were the subject of the Navy's original consultation with NMFS. For the potential impacts of invasive species, NMFS concluded that although it did not have the information available to reasonably predict the likelihood of adverse effects to ESA-listed coral species programmatically, the one-time transit of ex-RANGER on ESA-listed corals in the vicinity of the tow route presented a low risk (discountable) of adverse effects. NMFS also concluded that critical habitat for ESA-listed species would not likely be adversely affected. The Proposed Action would result in no reasonably foreseeable takes of marine mammals pursuant to the Marine Mammal Protection Act (MMPA).

Thus under NEPA, the Proposed Action would not result in significant impacts to the environment, and under E.O. 12114, Environmental Effects Abroad of Major Federal Actions, the Proposed Action would not result in significant harm to the environment in the Global Commons (the 'Global Commons' refers to the High Seas). The environmental consequences by resource area associated with implementation of the Proposed Action and the No-Action Alternative are presented and compared in Table ES-1.

Table ES-1 - Summary of Impacts

Resource Area	Proposed Action Alternative	No-Action Alternative
Cultural Resources	Adverse effect on the vessel; compliance with the Program Comment would mitigate the adverse effect (see Appendix). No effects on other cultural resources.	The No-Action Alternative results in retention of a cultural asset. No effects on other cultural resources.
Water Resources: Water Quality	No significant impacts to water quality.	No significant impacts to water quality.
Water Resources: Sediment Quality	No significant impacts to sediment quality.	No significant impacts to sediment quality.
Biological Resources: Benthic Community	No significant impacts to benthic biological resources.	No significant impacts to benthic biological resources.
Biological Resources: Fish and Essential Fish Habitat	No effects on Essential Fish Habitat No significant impacts to Essential Fish Habitat.	No significant impacts to Essential Fish Habitat.
Biological Resources: Marine Mammals	No reasonably foreseeable takes of marine mammals. No significant impacts/no significant harm to marine mammals.	No significant impacts to marine mammals.
Biological Resources: Threatened and Endangered Species	May affect, but not likely to adversely affect threatened/ endangered species during towing (see Tables 3-2 and 3-3). No effect to other threatened/endangered species No significant impacts/no significant harm to threatened/endangered species.	No significant impacts to threatened/endangered species.
Coastal Resources	No effect on any coastal use or resource. No significant impacts to coastal zone resources.	No significant impacts to coastal zone resources.
Air Quality/Climate Change	No significant impacts to air quality/climate change.	No significant impacts to air quality/climate change.

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ACRONYMS AND ABBREVIATIONS

ACOE	(U.S.) Army Corps of Engineers
ACHP	Advisory Council on Historic Preservation
AQCR	Air Quality Control Region
CAA	Clean Air Act
CATEX	Categorical Exclusion
CEQ	Council on Environmental Quality
CMP	Coastal Management Plan
CV	aircraft carrier
CWA	Clean Water Act
CZMA	Coastal Zone Management Act
DO	Dissolved Oxygen
DoD	United States Department of Defense
DOE	Determination of Eligibility
DOI	Department of the Interior
DOI	Determination of Ineligibility
DON	United States Department of the Navy
DPS	Distinct Population Segment
EA/OEA	Environmental Assessment/Overseas Environmental Assessment
EEZ	Exclusive Economic Zone
EO	Executive Order
EPA	Environmental Protection Agency
ESA	Endangered Species Act
FONSI	Finding of No Significant Impact
FONSH	Finding of No Significant Harm
ft	feet
IDIQ	Indefinite-Delivery, Indefinite Quantity
INACTSHIPMAINTO	Inactive Ships On-Site Maintenance Office
m	meter
MARAD	Maritime Administration
MBTA	Migratory Bird Treaty Act
MILCON	Military Construction
MMPA	Marine Mammal Protection Act
NAAQS	National Ambient Air Quality Standards
NAVSEA	Naval Sea Systems Command
NCSHPO	National Council for State Historic Preservation Officers
NEPA	National Environmental Policy Act
NHHC	Naval History and Heritage Command
NHPA	National Historic Preservation Act
NO_2	nitrogen dioxide
NRHP	National Register of Historic Places
NVR	Naval Vessel Register
O_3	Ozone

OPNAVINST	Chief of Naval Operations Instruction
OSHA	Occupational Safety and Health Administration
PCBs	polychlorinated biphenyls
PM10	particulate matter less than 10 microns in diameter
PM2.5	particulate matter less than 2.5 microns in diameter
PSNS	Puget Sound Naval Shipyard
SAV	Submerged Aquatic Vegetation
SEA 21I	Navy Inactive Ships Office
SHPO	State Historic Preservation Office
SIP	State Implementation Plan
SO_2	sulfur dioxide
U.S.	United States
WA	Washington

1.0 PURPOSE AND NEED

1.1 Introduction

This Environmental Assessment/Overseas Environmental Assessment (EA/OEA) evaluates the potential environmental effects of actions leading to the dismantling of the aircraft carrier ex-RANGER (CV 61) (Figure 1-1), currently berthed at the Naval Sea Systems Command (NAVSEA) Inactive Ships On-Site Maintenance Office (INACTSHIPMAINTO) Bremerton, WA.

Figure 1.1 – Ex-RANGER (CV 61), April 2014 at INACTSHIPMAINTO Bremerton

The Navy decommissioned USS RANGER, a post-World War II aircraft carrier, on July 10, 1993. Upon decommissioning, ex-RANGER was laid up for long-term preservation as a mobilization asset for possible future reactivation. She was subsequently stricken from the Naval Vessel Register (NVR) on March 8, 2004, and advertised for donation to a state or non-profit organization for use as a museum/memorial. However, no organization was able to meet the Navy's minimum requirements for ship donation. Ex-RANGER was removed from donation

hold on September 26, 2012, and designated for dismantling. There are no Navy requirements for the ship, as ex-RANGER is not needed for the defense of the country.

The purpose for the proposed action with the associated tow and dismantlement of this vessel is to execute Chief of Naval Operations (CNO) policy[1] for inactive ships stricken from the Naval Vessel Register and designated for disposal. The Proposed Action is needed to reduce the Navy's inactive ship inventory and eliminate costs associated with continuing to maintain the deteriorating ship in a safe stowage condition.

The Proposed Action, resulting in the dismantlement of ex-RANGER, fits NAVSEA's mission for the reduction of the Navy's inactive ship inventory.

This EA/OEA presents an analysis of the potential environmental consequences that may result from implementation of the Proposed Action. The EA/OEA identifies and analyzes potential consequences on the natural and human environment in sufficient detail to determine the significance of impacts on the affected environment.

The action proponent and lead agency for the Proposed Action is the U.S. Navy, NAVSEA, Inactive Ships Office (SEA 21I). There are no cooperating agencies for the preparation of this EA/OEA.

1.2 Ship Dismantling Program

Domestic ship dismantling and recycling contractors tow an inactive ship from one of the Navy's inactive ship maintenance facility to their ship dismantling facility. Prior to dismantlement of a ship, the Navy removes certain equipment and materiel for reuse on other vessels, thereby reusing previously committed resources. Once at the contractor's dismantling facility, the contractor then accomplishes all the work associated with the removal and proper disposal of hazardous materials, dismantles the ship and recycles the resulting scrap metals and salvageable equipment. Historically, the Navy has scrapped ships within the United States for the purpose of demilitarization and has no future plans to export ships for dismantling and recycling.

Contracts are awarded to companies that have demonstrated acceptable environmental and occupational safety and health management plans as well as the facilities, technical processes, and trained personnel necessary to properly dismantle a Navy ship in the United States. The contracting companies must already be in possession of all regulatory permits necessary for the performance of ship recycling activities. The contracted companies dismantle each ship into smaller segments, selling a variety of components as well as scrap metals. Wastes such as PCBs or asbestos are transferred to permitted disposal facilities.

[1] OPNAV Instruction 4770.5H, General Policy for the Inactivation, Retirement, and Disposition of U.S. Naval Vessels, 24 April 2014.

The dismantling contracts include a clause that requires the contractor to comply with all applicable Federal, state, and local environmental and occupational safety and health laws and regulations. The dismantling of ex-RANGER would be overseen by Navy civilian personnel to ensure contract compliance. The dismantling/recycling would occur at an existing industrial facility that is capable of the operation with current operational credentials and permitting that would allow them to conduct the dismantling in their normal course of business. Therefore, it is not anticipated that the contractor would need to obtain any additional regulatory permits in order to perform the requirements of the contract.

1.3 Project Location

The aircraft carrier ex-RANGER is currently berthed on the west side of Pier E of INACTSHIPMAINTO Bremerton. INACTSHIPMAINTO Bremerton has been in continual use for inactive ships for over sixty years. As of November 2014, there are eight vessels, including three carriers, at this facility. INACTSHIPMAINTO Bremerton is located in southern Bremerton, WA, on the north side of the Sinclair Inlet, which is on the southwest side of Puget Sound. INACTSHIPMAINTO Bremerton is a tenant on the western end of Naval Base Kitsap (Figure 1.2) within the Puget Sound Naval Shipyard (PSNS). Upon award of an aircraft carrier dismantling delivery order, the selected contractor would take possession of the vessel and tow her to its facility.

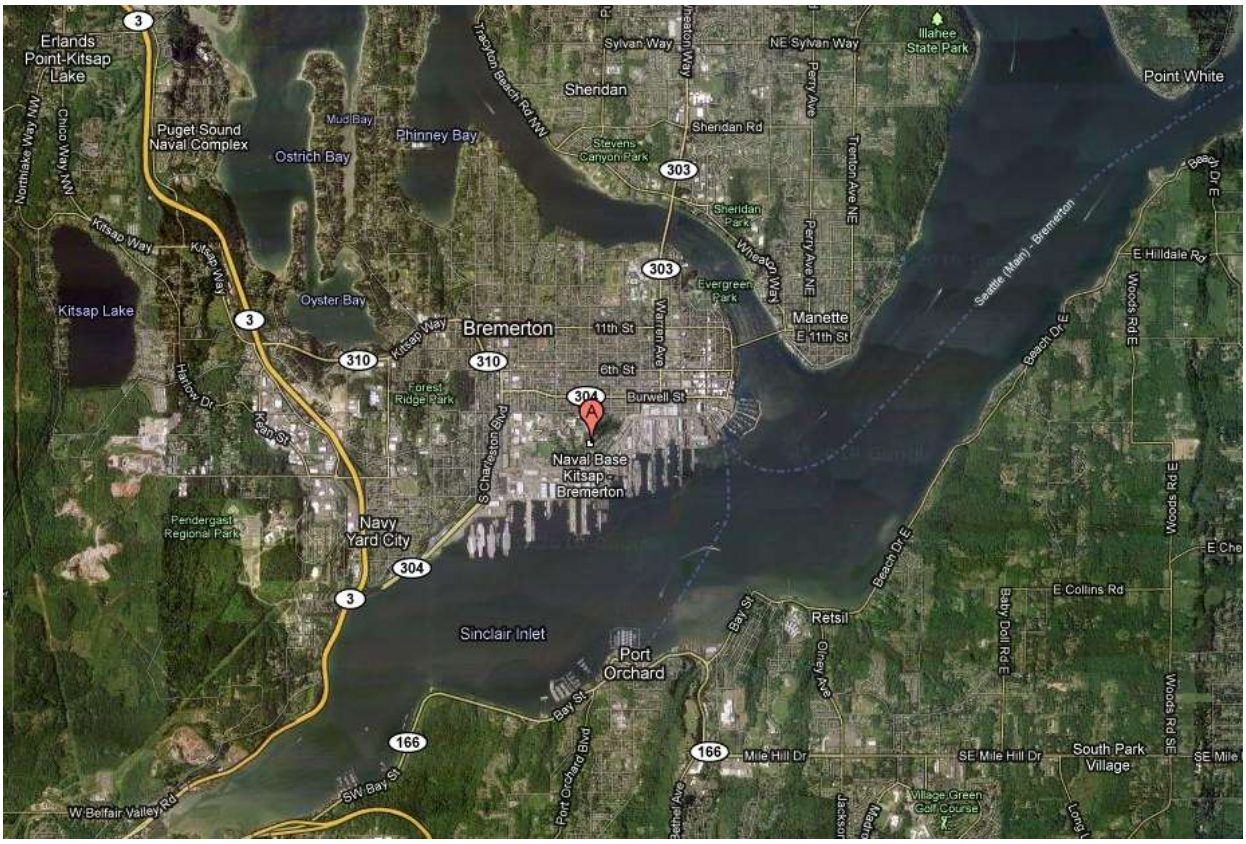

Figure 1.2 – Bremerton Area Map

1.4 History of ex-RANGER

The keel of USS RANGER was laid down August 2, 1954, by Newport News Shipbuilding & Drydock Co., Newport News, VA; launched September 29, 1956; sponsored by Mrs. Arthur Radford, wife of ADM Radford, Chairman of the Joint Chiefs of Staff; and commissioned at the Norfolk Naval Shipyard August 10, 1957, CAPT Charles T. Booth II, in command.

She joined the Atlantic Fleet October 3, 1957. Just prior to sailing in October 1957 for Guantanamo Bay, Cuba, for shakedown, she received the men and planes of Attack Squadron 85. She conducted air operations, individual ship exercises, and final acceptance trials along the eastern seaboard and in the Caribbean Sea until June 20, 1958. She then departed Norfolk, VA, with 200 Naval Reserve officer candidates for a 2-month cruise that took the carrier around Cape Horn. She arrived at her new homeport, Alameda, CA, on August 20 and joined the Pacific Fleet.

The carrier spent the remainder of 1958 in pilot qualification training for Air Group 14 and fleet exercises along the California coast. Departing January 3, 1959 for final training in Hawaiian

waters until 17 February, she next sailed as the flagship of RADM H. H. Caldwell, ComCarDiv 2, to join the 7th Fleet. Air operations off Okinawa were followed by maneuvers with South East Asia Treaty Organization naval units out of Subic Bay. A special weapons warfare exercise and a patrol along the southern seaboard of Japan followed. During this first WestPac deployment, USS RANGER launched more than 7,000 sorties in support of 7th Fleet operations. She returned to San Francisco Bay July 27, 1959.

During the next 6 months, USS RANGER kept herself in a high state of readiness through participation in exercises and coastal fleet operations. With Carrier Air Group 9 embarked, she departed Alameda February 6, 1960, for a second WestPac deployment and returned to Alameda August 30. From August 11, 1961, through March 8, 1962, USS RANGER deployed to the Far East a third time.

The next 7 months were filled with intensive training along the western seaboard in preparation for operations in the troubled waters of Southeast Asia. USS RANGER departed Alameda on November 9 for brief operations off Hawaii, then proceeded via Okinawa to the Philippines. She steamed to the South China Sea May 1, 1963, to support possible Laotian operations. When the political situation in Laos relaxed May 4, she resumed her operations schedule with the 7th Fleet. Arriving at Alameda from the Far East June 14, 1963, she underwent overhaul in the San Francisco Naval Shipyard August 7, 1963, through February 10, 1964. Refresher training out of Alameda commenced March 25, interrupted by an operational cruise to Hawaii from June 19 to July 10, 1964. USS RANGER again sailed for the Far East August 6, 1964. This deployment came on the heels of the unprovoked assault against USS MADDOX (DD 731) on the night of August 2 and, two nights later, against both USS MADDOX and USS TURNER JOY (DD 951) by North Vietnamese motor torpedo boats. In retaliation for this aggression on the high seas by North Vietnam, President Johnson, on August 5, directed the Navy to strike bases used by the North Vietnamese naval craft. As USS RANGER steamed from the western seaboard, some 60 attack sorties rose from the decks of USS TICONDEROGA (CV 14) and USS CONSTELLATION (CV 64).

USS RANGER made only an 8-hour stop in Pearl Harbor August 10, 1964, then moved on to Subic Bay, then to Yokosuka, Japan. In the latter port on October 17, 1964, she became flagship of RADM Henry L. Miller who commanded Fast Carrier Task Force 77. In the following months, she helped the 7th Fleet continue its role of steady watchfulness to keep open the sea lanes for the Allies and stop enemy infiltration by sea.

U.S. Army GEN William Westmoreland, commanding the Military Advisory Command in Vietnam, visited USS RANGER on March 9, 1965 to confer with Rear Admiral Miller. USS RANGER continued air strikes on enemy inland targets until April 13 when a fuel line broke, ignited and engulfed her No. 1 main machinery room in flames. The fire was extinguished in little over an hour. There was one fatality. She put into Subic Bay April 15 and sailed on the 20th for Alameda, arriving home on May 6. She entered the San Francisco Naval Shipyard May 13 and remained there under overhaul until September 30, 1965.

Following refresher training, USS RANGER departed Alameda on December 10, 1965, to rejoin the 7th Fleet. She and her embarked Carrier Air Wing 14 received the Navy Unit Commendation for exceptionally meritorious service during combat operations in Southeast Asia from January 10 to August 6, 1966.

USS RANGER departed the Gulf of Tonkin August 6, 1966, for Subic Bay, then steamed via Yokosuka for Alameda, arriving on the 25th. She stood out of San Francisco Bay on September 28, 1966, and entered PSNS two days later for overhaul. The carrier departed Puget Sound May 30, 1967, for training out of San Diego and Alameda. On July 21, 1967, she logged her 88,000th carrier landing.

From June until November, USS RANGER underwent a long and intensive period of training designed to make her fully combat ready. Attack Carrier Air Wing 2 (CVW-2) embarked on September 15, 1967, with the new Corsair II jet attack plane and the UH-2C Seasprite turboprop rescue helicopter, making USS RANGER the first carrier to deploy with these powerful new aircraft. From carrier refresher training for CVW-2, USS RANGER proceeded to fleet exercise *Moon Festival.* From October 9 to 16, the carrier and her air wing participated in every aspect of a major fleet combat operation.

USS RANGER departed Alameda November 4, 1967 for WestPac. Arriving in Yokosuka on November 21, she relieved USS CONSTELLATION and sailed for the Philippines on the 24th. After arriving at Subic Bay on November 29, she made final preparations for combat operations in the Tonkin Gulf. Commander, Carrier Division 3, embarked on November 30 as Commander, TG 77.7; and USS RANGER departed Subic Bay on December 1 for Yankee Station (a point in the Gulf of Tonkin used by the U.S. Navy aircraft carriers to launch strikes).

Arriving on station December 3, 1967, USS RANGER commenced another period of sustained combat operations against North Vietnam. Bob Hope's "Christmas Show" came to USS RANGER in Tonkin Gulf on December 21. Another welcome break in the intense pace of operations came with a call at Yokosuka during the first week of April. Returning to Yankee Station on April 11, USS RANGER again struck objectives in North Vietnam.

After five months of intensive operations, USS RANGER docked at Hong Kong on May 5, 1968, and then steamed for home. There followed a shipyard availability at Puget Sound that ended with USS RANGER's departure July 29 for San Francisco. Three months of leave, upkeep and training culminated in another WestPac deployment October 26, 1968, through May 17, 1969. She departed Alameda on yet another WestPac deployment in December 1969 and remained so employed until May 18, 1970, at which time she returned to Alameda, arriving June 1. USS RANGER spent the rest of the summer engaged in operations off the west coast, departing for her sixth WestPac cruise September 27, 1970. She returned to Alameda on June 7, 1971 and remained in port for the rest of 1971 and the first five months of 1972 undergoing regular overhaul. On May 27, 1972, she returned to west coast operation until 16 November when she embarked upon her seventh WestPac deployment.

On January 27, 1973, the Vietnam cease-fire, announced four days earlier, came into effect and USS RANGER, along with USS ORISKANY, USS AMERICA and USS ENTERPRISE on Yankee Station, cancelled all combat sorties into North and South Vietnam.

USS RANGER earned 13 battle stars for service in Vietnam.

USS RANGER returned to Alameda in August 1973 and remained in that area through May 7, 1974, when she deployed again to the western Pacific. During this cruise, USS RANGER was again deployed to Yankee Station to participate in operations significant to the withdrawal of forces involved there. She returned to homeport on October 18. On May 28, 1976, while on deployment, helicopter crews from HS-4 aboard USS RANGER, detachments from HC-3 on CAMDEN (AOE-2), MARS (AFS-1) and WHITE PLAINS (AFS-4), and helicopters from NAS Cubi Point, Republic of the Philippines, assisted in Philippine disaster relief efforts in the flood ravaged areas of central Luzon. Over 1,900 people were evacuated; more than 370,000 pounds of relief supplies and 9,340 gallons of fuel were provided by Navy and Air Force helicopters.

On July 12, 1976, USS RANGER and her escort ships of Task Force 77.7 entered the Indian Ocean and were assigned to operate off the coast of Kenya in response to a threat of military action in Kenya by Ugandan forces in the wake of the rescue of Israeli hostages held at Entebbe Airport in Uganda several days before.

In February 1977 USS RANGER departed Naval Air Station North Island for the PSNS for major overhaul. While in overhaul she received significant technological upgrades to her Command Information Systems, flight deck gear, and was fitted with Sea Sparrow missile defense systems. Additionally, the main machinery spaces were refitted with more reliable General Regulator forced balance automatic boiler and combustion control systems. In March 1978 the overhaul was completed and she began several months of shake down cruises and sea trials for re-certifications.

On February 21, 1979, USS RANGER deployed for her 14th WestPac cruise, tentatively scheduled to cross the Indian Ocean to present a show of force during the strife between North and South Yemen, a mission she would not complete. On April 5, 1979, she collided with the tanker Liberian Fortune just south east of Singapore while entering the Strait of Malacca. While the large oil tanker was severely damaged, USS RANGER endured a significant gash in her bow, rendering two fuel tanks unusable. She turned back to Subic Bay, Philippines for temporary repairs, and then to Yokosuka, Japan, for full repair.

On March 20, 1981, under the leadership of CAPT Dan A. Pederson, USS RANGER rescued 138 Vietnamese boat people from the South China Sea and brought them to the United Nation High Commission for Refugees (UNHCR) in Manila, Philippines. Among those rescued were the future U.S. Army Lt. Col. Lan T. Dalat and U.S. Army Captain Anthony H. Lang who settled in Orange County, California after their stay at the Vietnamese Refugee Camp (VRC) in Palawan, Philippines.

On March 21, 1981, an all-woman flight crew flying a C-1A Trader from VRC-40 "Truckin' Traders" landed aboard the carrier.

On July 18, 1981, USS RANGER collided with USS WICHITA (AOR 1) near Nicaragua, and on August 18, 1981, a crewman was blown overboard by jet exhaust. On November 1, 1981, a fire broke out in Main Machinery Room #4 due to a fuel spill during fuel transfer operations while USS RANGER was deployed in the Indian Ocean, east of Oman. Six crewmen were killed and 35 injured as a result of the fire, which knocked out one of the ship's four engines and disabled two of her four shafts, one of which was quickly put back into operation after the fire. The fire spread to the adjacent No. 2 Auxiliary Machinery Room and minor surrounding spaces. Flight operations had not yet commenced when the ship went to general quarters, so no aircraft were yet in the air. This was fortunate because the ship was then out of range of land. The carrier returned to the Philippines after 121 consecutive days at sea.

In early 1985, some interior filming of the film *Top Gun* took place on board USS RANGER. In 1986, filming of the film *Star Trek IV: The Voyage Home* took place on board USS RANGER, in port, with lights and canopies set up to mimic the spaceship “Enterprise”. The Marine Detachment provided personnel to chase the actors around the ship.

July 14, 1987, marked the start of USS RANGER’s "Pearl" Anniversary Cruise. During this cruise, USS RANGER relieved USS MIDWAY and her Carrier Group in the Indian Ocean. It was during this period that USS RANGER took part in Operation *Earnest Will* under which the Kuwait tankers were re-flagged under U.S. Colors.

On July 24, 1987, Tactical Electronics Warfare Squadron 131 (VAQ 131) began the first Pacific Fleet deployment of the EA-6B Prowler equipped with AGM-88 HARM missiles, deployed on USS RANGER.

On October 19, 1987, USS RANGER took part in Operation *Nimble Archer*, an attack on two Iranian oil platforms in the Persian Gulf by United States Navy forces. The attack was a response to Iran's missile attack three days earlier on the MV Sea Isle City, a reflagged Kuwaiti oil tanker at anchor off Kuwait. The action occurred during Operation *Earnest Will*, the effort to protect Kuwaiti shipping amid the Iran-Iraq War. Air cover was provided by USS WILLIAM H STANDLEY (CG 32), two F-14 Tomcat fighters and an E-2 Hawkeye from USS RANGER.

On August 3, 1989, USS RANGER rescued 39 Vietnamese refugees, adrift for 10 days on a barge in heavy seas and monsoon rains in the South China Sea, about 80 miles (130 km) from NAS Cubi Point, R.P. SH-3s Sea Kings from HS-14 assisted. An A-6 Intruder from VA-145 spotted the barge, which had apparently broken loose from its mooring near a small island off the coast of Vietnam with 10 men on board. Twenty-nine other refugees from a sinking refugee boat climbed aboard the barge when it drifted out to sea. After examination by medical personnel, all were flown to NAS Cubi Point for further processing.

USS RANGER participated in Operation *Desert Storm* in 1991 launching sorties from its location in the Persian Gulf. An A6E Intruder from USS RANGER was shot down two miles off the Iraqi coast by anti-aircraft artillery on January 18, 1991, after laying MK36 naval mines on a waterway linking the Iraqi naval base of Umm Qasr with the Persian Gulf.

On January 26, 1991, an A-6B Prowler from USS RANGER spotted two large tankers in a waterway northeast of Bubiyan Island. A package of two of USS RANGER's A-6Es hit one of them with an AGM-123 Skipper missile on the starboard side. On February 6 an F-14A Tomcat from VF-1, off USS RANGER, downed an Iraqi Mi-8 Hip helicopter with an AIM-9M Sidewinder missile.

On April 21, 1992, in harmony with other World War II 50th Anniversary festivities, USS RANGER participated in the commemorative re-enactment of the Doolittle Raid on Tokyo, Japan. Two World War II-era B-25 bombers were craned on board and over 1,500 guests (including national, local and military media) were embarked to witness the two vintage planes thunder down Ranger's flight deck and take off.

Fully combat ready, USS RANGER began her 21st and final western Pacific and Indian Ocean deployment on August 1, 1992. On August 18, she entered Yokosuka, Japan for a six-day port visit and upkeep. She entered the Persian Gulf on September 14 by transiting the Strait of Hormuz. The next day she relieved USS INDEPENDENCE (CV 62) in an unusual close aboard ceremony and along with her embarked Air Wing, Carrier Air Wing 2, immediately began flying patrol missions in support of the United Kingdom and United States' declared "No Fly" zone in southern Iraq: Operation *Southern Watch*.

While in the Persian Gulf, former Cold War adversaries became at-sea partners as USS RANGER joined with British, and French naval forces and the Russian guided missile destroyer ADMIRAL VINOGRADOV for an exercise involving communication, maneuvering and signaling drills. During joint operations, a Russian Kamov Ka-27 "Helix" helicopter landed aboard USS RANGER. It was the first such landing on a U.S. Navy aircraft carrier.

USS RANGER left the Persian Gulf on December 4, 1992, and steamed at high speed to the coast of Somalia. She played a significant role in the massive relief effort for starving Somalis in Operation *Restore Hope*. The USS RANGER/CVW-2 team provided photo and visual reconnaissance, airborne air traffic control, logistics support and on-call close air support for Navy and Marine amphibious forces. Throughout Operations *Southern Watch* and *Restore Hope,* USS RANGER took 63 digital photographs which were sent by International Marine Satellite to the Navy Office of Information within hours of being taken. This was the first time digital pictures were successfully transmitted from a ship at sea.

On December 19, 1992, USS RANGER was relieved on station by USS KITTY HAWK and began her last journey homeward to San Diego.

USS RANGER did not undergo the Service Life Extension Program (SLEP) modernization process as did her three sisters and the later KITTY HAWK-class ships, and by the early 1990s her material condition was getting poor. Both the out-going Bush and in-coming Clinton Presidential Administrations recommended cuts to the defense budget and so the retirement of USS RANGER, along with her sisters USS FORRESTAL (AVT 59) and USS SARATOGA (CV 60), was put forth.

USS RANGER was decommissioned on July 10, 1993, after 36 years of service. Upon decommissioning, ex-RANGER was laid up for long-term preservation as a mobilization asset for possible future reactivation. She was subsequently stricken from the Naval Vessel Register (NVR) on March 8, 2004, and advertised for donation to a state or non-profit organization for use as a museum/memorial. However, no organization was able to meet the Navy's minimum requirements for ship donation. Ex-RANGER was removed from donation hold on September 26, 2012, and designated for dismantling.

Ex-RANGER meets the criteria to be eligible for listing in the National Register of Historic Places (NRHP) according to an evaluation prepared by the Naval History and Heritage Command (NHHC) ships history division (see Appendix). Support for eligibility includes her receipt of 13 battle stars for service during the Vietnam War and her service during the Persian Gulf conflicts including the liberation of Kuwait.

1.5 Applicability of NEPA and Executive Order 12114

The NEPA, as amended, requires Federal agencies to assess any reasonably foreseeable direct and indirect effects of major Federal actions on human health and the environment (42 U.S.C. §§ 4321-4370f). The potential dismantlement of ex-RANGER is considered a "major Federal action" under NEPA. There is no applicable Categorical Exclusion (CATEX) for this action; the CATEX for decommissioning, disposal, or transfer of naval vessels (Number 22, "Decommissioning, disposal or transfer of Navy vessels, aircraft, vehicles and equipment when conducted in accordance with applicable regulations, including those regulations applying to removal of hazardous materials") does not apply to the Proposed Action because of the ship's eligibility for listing in the NRHP. To satisfy NEPA requirements, the Navy must evaluate the interrelated environmental and cultural resource impacts of the Proposed Action, identify reasonable alternatives, analyze potential direct, indirect, and cumulative impacts that may result, and determine whether the Proposed Action will have a significant impact on the human environment. The potential towing of ex-RANGER to any dismantling facility would bring the vessel outside 12 nm from shore; therefore, E.O. 12114 applies to this Proposed Action.

This EA/OEA documents the Navy's evaluation and assessment of the potential environmental impacts associated with the decision to dismantle ex-RANGER.

This EA/OEA has been prepared by the Navy in accordance with the following laws, regulations and policy:

- The NEPA of 1969, as amended (42 United States Code (U.S.C.) §§ 4321-4370d);
- E.O. 12114, Environmental Effects Abroad of Major Federal Actions;
- The Council on Environmental Quality (CEQ) regulations implementing NEPA (40 C.F.R. §§ 1501-1508);
- Policies and Responsibilities for Implementation of NEPA within the DON, 32 C.F.R. Part 775; and
- CNO Environmental Readiness Program Manual (OPNAV M-5090.1, January 10, 2014).

This EA/OEA also draws upon information in the possession of or obtained by the Navy, and other readily available public sources of information.

The NEPA, CEQ regulations, E.O. 12114 and the Navy's procedures for implementing the NEPA specify that an EA should only address those resource areas potentially subject to impacts. In addition, the level of analysis should be commensurate with the anticipated level of environmental impact. For this Proposed Action, no construction activities would be required. Any new or maintenance dredging, if required, would be accomplished using existing permits with the ACOE. Environmental resources potentially affected by the Proposed Action and all reasonably foreseeable actions to be evaluated in this EA/OEA include:

- Cultural Resources;
- Water Resources, including Coastal Zone Resources;
- Biological Resources; and
- Air Quality/Climate Change

The vessel would be towed to a dismantling facility that is closed to public access. The dismantling facility has existing capacity to undertake the dismantling project without any construction or modifications to facilities. Moreover, the Navy's dismantling contracts require that the dismantling facility obtain all applicable environmental and occupational safety and health permits prior to commencing the dismantling project. The resources that are not evaluated in this EA/OEA are:

- Land Use (there will be no change in land use as a result of the Proposed Action);
- Geology, Soils (including wetlands) and Seismicity (there would be no significant impact to these resources and conditions; any new or maintenance dredging, if necessary, would be conducted by the contracted dismantling company under existing permitting with the ACOE, which includes a 10-year channel maintenance period);
- Socioeconomics (the project would cause a temporary improvement in the local economy through job creation but would not significantly impact the state, regional and local economies, nearby housing, or community services);

- Environmental Justice (the project is not expected to impact environmental and human health conditions in minority and/or low-income communities because none are located within a half-mile of the potential dismantling facilities in Brownsville, TX, which are restricted from public access and operate in compliance with all regulated environmental statutes);
- Transportation (the Proposed Action would not result in increased traffic or number of personnel at the vessel's current location or the dismantling facilities' locations);
- Noise (the facility in which the dismantling would be conducted would be in compliance with applicable environmental statutes related to noise);
- Utilities (there is no need for additional utilities to be installed or constructed for the Proposed Action);
- Public Health and Safety (the facilities are closed to public access); and
- Aesthetics and Visual Resources (although the PSNS, in which INACTSHIPMAINTO Bremerton is located, has been designated a historic district, the vessel has not been recognized as having a significant aesthetic value that contributes to the shipyard or that would be affected by its removal from INACTSHIPMAINTO Bremerton. Removal of ex-RANGER from INACTSHIPMAINTO Bremerton would not significantly alter the visual character of INACTSHIPMAINTO as INACTSHIPMAINTO will continue to be used for storage of inactive ships. In addition, the Proposed Action would not impact the existing visual character or quality of the possible dismantling sites and their surroundings).

1.7 Intergovernmental Coordination

In order to identify permits, certifications, and/or determinations that may be required for the Proposed Action and all reasonably foreseeable, related actions, the EA/OEA intergovernmental coordination process included consideration of the following statutes and their respective implementing regulations. The statutes pertaining to the Proposed Action and all reasonably foreseeable, related actions included, but were not limited to:

- The National Environmental Policy Act (NEPA) (42 U.S.C. § 4321 et seq.);
- The National Historic Preservation Act (NHPA) (16 U.S.C. § 470 et seq.);
- The Coastal Zone Management Act (CZMA) of 1972, as amended (16 U.S.C. § 1451 et seq.);
- The Clean Air Act (CAA) as amended (42 U.S.C. § 7401 (1994), including the 1990 General Conformity Rule;
- The Clean Water Act (CWA), Water Quality Certification (33 U.S.C. § 1341);
- CWA, Section 404, Dredge and Fill Permitting (33 U.S.C. § 1344);
- The Marine Mammal Protection Act of 1972 (16 U.S.C. §§ 1361-1407), as amended;
- The Magnuson-Stevenson Act (16 U.S.C. §§ 1801 et seq.)
- Endangered Species Act of 1973 (16 U.S.C. §§ 1531-1544), as amended;
- E.O. 12114, Environmental Effects Abroad of Major Federal Actions; and

- E.O. 12372, Intergovernmental Review of Federal Programs.

As part of the NEPA compliance process for ex-RANGER, coordination with regulatory agencies was initiated to obtain regulatory input related to all Proposed Action alternatives and to clearly define their regulatory requirements. The Navy consulted with the following regulatory agencies: U.S. Department of Commerce, National Oceanic and Atmospheric Administration, NMFS; the State of Washington Department of Ecology; and the State of Texas Coastal Commission. The letter correspondence with these agencies is included in the Appendix. For ex-RANGER, the Navy notified the National Conference of State Historic Preservation Officers (NCSHPO) in accordance with the Program Comment that ex-RANGER is eligible for listing in the National Register of Historic Places. The Navy also posted the Determination of Eligibility (DOE) on the inactive ships website, www.navsea.navy.mil/teamships/Inactiveships/Historic/Completed_Evaluations_2010.aspx, for a 60-day public comment period that ended on September 13, 2010. No comments were received by any stakeholder or member of the public. The letter correspondence to the NCSHPO is included in the Appendix.

There are several Native American Indian Tribes with treaty rights along the transit to the Pacific Ocean, and along the coast. However, the Proposed Action would not change any Tribe's ability to exercise Tribal treaty rights to access Usual and Accustomed fishing areas. No consultation with the Tribes was conducted.

This EA/OEA has been prepared using a systematic, interdisciplinary assessment process designed to provide decision makers with an organized analysis of the potential environmental consequences of implementing the Proposed Action and all reasonably foreseeable related actions. Section 1 provides a discussion of the Purpose and Need for the Proposed Action. Section 2 discusses the Proposed Action in greater detail and provides a discussion of reasonable alternatives to the Proposed Action. Section 3 provides a description of the affected environment. Section 4 provides an analysis of potential environmental impacts. Section 5 discusses the cumulative impacts on the environment resulting from past, present and reasonably foreseeable future actions. Section 6 discusses other NEPA considerations. Section 7 presents the conclusion. Section 8 provides a list of preparers. Section 9 provides persons and agencies contacted. Section 10 lists references used in the preparation of this EA/OEA.

2.0 DESCRIPTION OF PROPOSED ACTION AND ALTERNATIVES

2.1 Proposed Action

The Proposed Action is the associated actions that would occur with the award of a delivery order for the dismantlement of ex-RANGER to one of three dismantling contractors located in Brownsville Navigation District, TX (hereinafter referred to as "Brownsville, TX" or "Brownsville") which are capable of dismantling a vessel the size of ex-RANGER. The Navy's dismantlement contract requires that the contractor tow ex-RANGER from its current location in Bremerton, WA, to the awardee's facility in Brownsville, and that the contractor dismantle and recycle her in accordance with all applicable Federal, state and local laws and regulations. The purpose for the proposed dismantlement of this vessel is to execute Chief of Naval Operations (CNO) policy for inactive ships stricken from the Naval Vessel Register and designated for disposal. The Proposed Action is needed to reduce the Navy's inactive ship inventory and eliminate costs associated with continuing to maintain the deteriorating ship in a safe stowage condition.

Ex-RANGER is currently moored at INACTSHIPMAINTO Bremerton, WA. Three aircraft carrier dismantling IDIQ contracts with dismantling facilities in Brownsville have already been awarded with a minimum quantity of one aircraft carrier for dismantling. Ex-RANGER would be the first follow-on delivery order, which would become the second aircraft carrier delivery order awarded to one of the three existing aircraft carrier dismantling IDIQ contractors.

If the Navy decides to implement the Proposed Action, construction of new facilities would not be required. The Navy would solicit proposals from the three existing aircraft carrier IDIQ contractors, then issue a delivery order under one of the existing aircraft carrier dismantling IDIQ contracts to the offeror presenting the best value to the government. The delivery order would require towing ex-RANGER from its current location at INACTSHIPMAINTO Bremerton to the selected contractor's ship dismantling facility in Brownsville, TX. Some new or maintenance dredging may be needed to expand the length and width of an existing dismantling slip depending on which contractor is selected. Should new or maintenance dredging be necessary, it would be conducted by the dismantling contractor in accordance with existing permits with the ACOE (ACOE, 2012).

The Navy's ship dismantling contracts include a clause that requires the contractor to comply with all applicable Federal, state and local environmental and occupational safety and health laws and regulations.

The Proposed Action would include the following:

<u>Towing</u>

Ex-RANGER would be towed from her present location at INACTSHIPMAINTO Bremerton, WA to the selected contractor's facility in Brownsville, TX. The contractor would be

responsible for the tow. Ex-RANGER would be towed through the shipping channels of Puget Sound and into the open ocean. She would then travel south in international waters and pass Cape Horn through the Strait of Magellan. During this period of the tow, ex-RANGER would be situated within the Exclusive Economic Zone (EEZ) and territorial seas of the Governments of Chile and Argentina. She would then continue being towed in international waters of the South Atlantic Ocean and into the Gulf of Mexico. The tow would reach the territorial waters of the United States within the Gulf of Mexico en route to a dismantling location.

The vessel is non-operational (no propeller rotation or water intakes/discharges); therefore, due to the size of the ship, the use of several tug boats would be required. The tug and tow would travel at less than 10 knots. Towing would be conducted in accordance with the requirements of the Appendix H of the U.S. Navy Towing Manual, SI746-AA-MAM-010, Rev. 3, July 2002. The Navy contractor would be responsible for making all applicable notifications for the towing activity, such as developing a U.S. Coast Guard Local Notice to Mariners, and would adhere to applicable safety and marine mammal/endangered species requirements in accordance with the letter from NMFS received by the Navy on 17 November 2014 resulting from informal consultation with NMFS, for towing the inactive ship. If necessary, the ballast tanks would be trimmed at INACTSHIPMATINTO Bremerton in preparation for towing. Commercial pilots would be utilized for departures from and entries into ports.

Navigation

The characteristics of the tugs used for the towing of vessels to be disposed of by dismantling would depend on the contractor ultimately hired to perform the task, the route chosen, and the size of the tow. Within harbors where the ships are berthed, smaller harbor tugs would be used to move the inactive ship away from the piers and into position where the cable could be passed from the towing tug and attached to the vessel.

The size of the tug employed for the inactive vessel depends on factors previously mentioned. However, the minimum requirement is a tug with 80 tons bollard pull capability.

A map showing the probable towing route from Bremerton, WA to a dismantling facility in or near Brownsville, TX, as shown in Figure 2.1. Ex-RANGER is too large for transit through the Panama Canal.

Figure 2.1 – Tow Route from Bremerton, WA, to Brownsville, TX

Dismantling Process

The dismantling actions would take place at a private-sector facility. Exact dismantling procedures vary somewhat among recycling facilities. However, for the purpose of this analysis, a general description of the dismantling process is provided below.

Dismantling, also called ship breaking and ship scrapping, is any breaking down of a vessel's structure to dismantle the vessel. Two methods of dismantling a ship are the afloat (moored) method and the dry-dock method. The afloat method involves a ramped marine slip where the ship is winched out of the water as dismantling lightens the ship. In the dry-dock method, the ship is docked in either a floating dry dock or graving dock that is deflooded. In either case, hazardous materials must be removed before dismantling begins.

Most ship dismantling is performed in slips, which are dredged openings in the bank of the ship channel. Slips are generally 400 to 1100 feet long and 100 to 120 feet wide at the entrance. A large winch at the head of the slip is used to drag the hull farther into the slip as work progresses. Booms are placed around the ship as a precaution to help contain any debris.

Dismantling consists of removing mechanical, hydraulic and/or electronic components that have potential market value for resale or reuse and then physically cutting the remainder of the hull to allow the recycling of metals and other material by sale to salvage yards or smelters. Fixtures, anchors, chains, and small equipment are removed initially. Machinery components are typically removed throughout the recycling process. During the preparation phase of recycling, small articles and the propellers are removed, which allows the hull to be pulled into shallow water where cutting usually takes place. As layers of the ship are cut, large reusable or recyclable components are removed as they become accessible (MARAD, 2009). Dismantling is a very labor-intensive, manual process.

The ship may contain hazardous materials, including asbestos, PCBs, oils, and fuels which are removed before dismantling begins. Lead-based paint is removed from cut lines and compartments so that large sections of the ship can be removed. The engine rooms usually contain the most asbestos and, therefore, take the longest for asbestos removal to be complete. Any PCB-containing materials that are accessible are removed, as well as any regulated PCB-containing paint coatings from areas to be cut. Some regulated PCB-containing materials may be left in place on the room-sized pieces, only to be removed after the large piece is moved to shore. Following asbestos removal, paint is removed from surfaces to be cut.

After their removal from the ship, ship machinery components are typically handled in the yard, or what is commonly called the scrap yard. Scrap metals, including steel, aluminum, copper, copper nickel alloy, and lesser amounts of other metals, are sorted by grade and composition and sold to re-melting firms or to scrap metal brokers. Other materials that are not recycled, including hazardous materials and other wastes, are disposed of according to applicable Federal, state, and local laws and regulations. The Navy and the MARAD work closely and cooperatively with the Environmental Protection Agency (EPA) and Occupational Safety and Health Administration (OSHA) to ensure that domestic ship recycling facilities have the capability of dismantling ships in a manner that protects the environment, and worker safety and health. Contractors are required to have a Technical Operational Plan, an Environmental Management Plan, and a Safety and Health Management Plan in place for their work. Two applicable guides, EPA Ship Scrappers Guide and OSHA Safe Work Practices for Shipbreaking, can be found on the SEA 21I website: http://www.navsea.navy.mil/teamships/Inactiveships.

2.2 Proposed Action Alternatives

The Navy awarded a multiple award IDIQ contract to three aircraft carrier dismantling contractors. The contracts are five-year term contracts where the Navy will solicit additional delivery orders for aircraft carrier dismantling over the five-year period. These contractors and their facilities are the only contractors that satisfy the Navy's contractual requirements for dismantling aircraft carriers. Therefore, the alternatives analysis in this EA/OEA is limited to potential environmental impacts associated with the Brownsville locations.

The No-Action Alternative for this Proposed Action is to keep and maintain the vessel at INACTSHIPMAINTO Bremerton. The No-Action Alternative for this Proposed Action is described in Section 2.4.

Alternatives Screening Analysis

Ex-RANGER has the following characteristics:

Length Overall: 1,088 feet (ft)
Beam: 130 ft
Flight Deck Width: 282 ft
Draft: 22.67 ft fwd, 35.44 ft aft
Air draft: 172.4 ft

Current Displacement: 61,993 tons

Screening criteria were developed to identify reasonable alternatives based on the purpose and need of the Proposed Action and to eliminate those that did not meet the criteria. For an alternative to be considered reasonable, it must:

- Be an approved domestic dismantling facility large enough to support a vessel of this size.
- Have waterways leading up to the facility that are deep enough to allow ex-RANGER to be towed to the site.

Alternatives Considered but Eliminated

In accordance with OPNAVINST 4770.5H, General Policy for the Inactivation, Retirement, and Disposition of U.S. Naval Vessels, there are six possible methods for the disposition of ships stricken from the NVR, one of which is dismantling. The following are five alternatives for the disposition of ex-RANGER and the reasons why they were eliminated from further consideration:

- Fleet Training Exercise Requirements:
  This alternative results in the sinking of the ship during at-sea, live-fire training exercises (SINKEX). Current policy does not include the use of aircraft carriers for SINKEX, thus this alternative is not an option for ex-RANGER.
- Foreign Military Sale Transfer:
  This alternative is not feasible as the U.S. Department of Defense (DoD) does not allow aircraft carriers to be available for Foreign Military Sale transfer, thus this alternative is not an option for ex-RANGER.
- Title Transfer to the Maritime Administration (MARAD), Department of Transportation (DOT):
  This alternative is only applicable to merchant-type ships such as amphibious and auxiliary ships, pursuant to the Merchant Marine Act of 1936. Because ex-RANGER is an aircraft carrier, this alternative is not available.
- Artificial Reefing:
  The Navy has determined that this alternative is not feasible due to the extensive presence of solid materials containing PCBs at levels which exceed USEPA acceptable levels; consequently, ocean disposal by means of artificial reefing would be prohibited. Removal of these materials prior to artificial reefing of this vessel would not be practicable.
- Donation Transfer:
  Ex-RANGER was designated for donation as a museum or memorial for over eight years. That period of time exceeds both the mitigation requirements in the Navy Program Comment (ACHP, 2010) and Navy policy. During this period, no organization was able to meet the Navy's minimum requirements for ship donation. Due to the need to dispose of inactive vessels, the Navy cannot continue to berth ex-RANGER for an additional extended period in order to provide opportunity for an organization to develop a viable plan and obtain the necessary

funding to convert ex-RANGER into a museum. Thus, this alternative is not an option for ex-RANGER.

2.3 Brownsville, TX, Alternative

This alternative would dismantle ex-RANGER at a facility in the Brownsville, TX (Figure 2.2). The selected dismantling facility would have the capability of dismantling a carrier of this size and would not require construction of any new facilities. However, some new or maintenance dredging may be needed to expand the length and width of an existing dismantling slip depending on which contractor is selected. Should new or maintenance dredging be necessary, it would be conducted by the dismantling contractor in accordance with existing permits with the ACOE (ACOE, 2012).

There are no navigational concerns of ex-RANGER entering the Port of Brownsville. This capability has already been demonstrated with the arrival of ex-FORRESTAL (AVT 59) in Brownsville in February 2014. The Port of Brownsville is located three miles from Mexico, and two miles from Brownsville, the southernmost city in Texas. A seventeen-mile shipping channel connects the Port from the Gulf of Mexico through the Laguna Madre, adjacent to South Padre Island.

Two mile-long rock jetties protect the channel entrance. Navigationally, the ship channel has no bridges or other obstructions for the entire length of this virtually straight waterway. The shallowest part of the transit is the turning basin at 36 ft. The rest of the transit uses a deep water channel that has controlling depths at mean low water of 42 to 44 ft, depending on location.

Figure 2.2 – Facilities Along Brownsville, TX, Ship Channel

2.4 No-Action Alternative

If the Federal Government does not award an aircraft carrier dismantling delivery order for ex-RANGER, the No-Action Alternative would result by default. The No-Action Alternative includes continued berthing of ex-RANGER at INACTSHIPMAINTO Bremerton.

If the vessel is not removed from the inactive ship inventory, the ship would continue to be maintained in safe stowage (i.e., fire and flood protection).

The No-Action Alternative does not meet the Navy's operational need to reduce the Navy's inactive ship inventory and eliminate costs associated with continuing to maintain ex-RANGER in a safe stowage condition.

2.5 Summary of Impacts

The environmental consequences associated with implementation of these alternatives are presented and compared in Table 2-1. For a detailed description and analysis, refer to Chapter 4, Environmental Consequences.

Table 2-1 - Summary of Impacts

Resource Area	Proposed Action Alternative (Brownsville, TX)	No-Action Alternative
Cultural Resources	• Adverse effect on the vessel; compliance with the Program Comment for Navy vessels would mitigate the adverse effect (see Appendix) • No effects on other cultural resources	• The No-Action Alternative results in retention of a cultural asset • No effects on other cultural resources
Water Resources: Water Quality	• No significant impacts to water quality	• No significant impacts to water quality
Water Resources: Sediment Quality	• No significant impacts to sediment quality	• No significant impacts to sediment quality
Biological Resources: Benthic Community	• No significant impacts to benthic biological resources	• No significant impacts to benthic biological resources
Biological Resources: Fish and Essential Fish Habitat	• No effect on Essential Fish Habitat • No significant impacts to Essential Fish Habitat	• No significant impacts to Essential Fish Habitat
Biological Resources: Marine Mammals	• No reasonably foreseeable takes of marine mammals • No significant impacts/no significant harm to marine mammals	• No significant impacts to marine mammals
Biological Resources: Threatened and Endangered Species	• May affect, but not likely to adversely affect threatened/ endangered species during towing (see Tables 3-2 and 3-3) • No effect to other threatened/endangered species • No significant impacts/no significant harm to threatened/endangered species or marine mammals	• No significant impacts to threatened/endangered species
Coastal Resources	• No effect on any coastal use or resource • No significant impacts to coastal zone resources	• No significant impacts to coastal zone resources
Air Quality/Climate Change	• No significant impacts to air quality/climate change	• No significant impacts to air quality/climate change

3.0 AFFECTED ENVIRONMENT

This chapter discusses the resources that are present during the phases of operation for the Proposed Action Alternative and the No-Action Alternative. The Proposed Action Alternative has three phases which have separate environmental analysis considerations. The first phase begins at the removal of the vessel from INACTSHIPMAINTO Bremerton and continues with towing through the Strait of Juan de Fuca. The second phase is the towing past the Strait of Juan de Fuca into the open ocean. The third phase is towing through the open ocean leading to the destination port. The dismantling contractor facilities are all located in Brownsville and are the only facilities that satisfy the Navy's contractual requirements for dismantling aircraft carriers. Therefore, the alternatives analysis in this EA/OEA is limited to potential environmental impacts associated with the Brownsville locations.

Beginning with the first phase of the Proposed Action Alternative, the removal of ex-RANGER from her berth at INACTSHIPMAINTO Bremerton, the potentially affected resources that are evaluated include cultural resources, water resources including coastal resources (water quality and sediments), biological resources (benthic community, fish and essential fish habitat, marine mammals, threatened or endangered species), and air quality. During the second phase, towing in the open ocean, there would be no effects to sediments or benthic habitats. Other than the ship itself, the only potentially affected cultural resources which may occur at sea are ship or airplane wreck sites, which are in deep water and not affected by ocean going vessels. Transiting the open ocean could potentially affect water quality, marine mammals, and protected species. At the third phase, the approach of the tow to a dismantling facility near Brownsville, TX, the potentially affected resources would include cultural resources, water resources including coastal resources (water quality and sediments), biological resources (benthic community, fish and essential fish habitat, marine mammals, threatened or endangered species), and air quality.

3.1 Cultural Resources

3.1.1 Regulatory Setting

Section 106 of the NHPA requires Federal agencies to take into account the effects of their undertakings on historic properties. The lead Federal agency must also allow the ACHP an opportunity to participate in Section 106 consultation whenever it determines that the proposed undertaking will adversely affect historic properties or resources that are listed or are eligible for listing in the NRHP. The Federal agency, in consultation with the relevant State Historic Preservation Office (SHPO), the ACHP, and other consulting parties, must consider methods that would minimize, mitigate, or avoid any adverse effects that such undertaking would have on properties that are listed in the NRHP, or that are determined to be eligible for listing. Sections 106 and 110 of the NHPA require Federal agencies to identify, evaluate, inventory, and protect historic properties that are under their jurisdiction and control. The NHPA imposes no absolute preservation requirements; however, the Navy must follow and document mandated procedures for any Navy decision regarding undertakings that may affect cultural resources.

The Department of the Interior (DOI), through the National Park Service (NPS), established four criteria for determining whether a property is eligible for listing in the NRHP. The four evaluation criteria are codified in 36 C.F.R. § 60.4 and are as follows:

a. are associated with events that have made a significant contribution to the broad patterns of our history; or
b. are associated with the lives of persons significant in our past; or
c. embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or
d. have yielded, or may be likely to yield, information important in prehistory or history

On March 5, 2010, pursuant to 36 C.F.R. §800.14(e), the ACHP adopted the Navy's Program Comment for Implementing Section 106 of the NHPA.[2] Navy vessels that satisfy the Program Comment criteria below, during their years of service, are eligible for listing in the NRHP:

a. The vessel was awarded an individual Presidential Unit Citation (A Presidential Unit Citation is awarded to military units that have performed an extremely meritorious or heroic act, usually in the face of an armed enemy.)
b. An individual act of heroism took place aboard the vessel such that an individual was subsequently awarded the Medal of Honor or the Navy Cross. (The Medal of Honor is awarded for valor in action against an enemy force. The Navy Cross is awarded for extraordinary heroism in action not justifying an award of the Medal of Honor.)
c. A President of the United States was assigned to the vessel during his or her naval service.
d. The vessel was the first to incorporate engineering, weapons systems, or other upgrades that represent a revolutionary change in naval design or warfighting capabilities, or other special and unique considerations.
e. Some other historic or socially significant event occurred on the vessel.

Navy vessels that meet one or more of the Program Comment criteria, and that continue to possess integrity of (as appropriate) design, materials, workmanship, feeling and/or association are eligible for listing in the NRHP.

The Navy, in considering listing a historic vessel in the NRHP, prepares a Determination of Eligibility (DOE) or Determination of Ineligibility (DOI) document for listing in the NRHP, and notifies the NCSHPO.

Requirements regarding consultation with consulting parties such as the ACHP, SHPO, Tribal Historic Preservation Office (THPO), Indian tribes, and interested public vary on a case by case

[2] Pursuant to 36 C.F.R. §800.14(e), the ACHP adopted the Navy's Program Comment for Implementing Section 106 of the NHPA. for the Evaluation of Vessels for Eligibility for Listing in the National Register of Historic Places and the Treatment of Eligible Vessels to Resolve Adverse Effects that May Result from Certain Methods of Final Disposition.

basis. In general, Federal agencies should initiate consultation at the earliest stage in the planning process to allow consideration of all possible alternatives that would minimize, mitigate, or avoid adverse effects to an historic property.

3.1.2 Navy Program Comment Compliance for Ex-RANGER

Ex-RANGER meets the criteria to be eligible for listing in the NRHP according to an evaluation prepared by the NHHC ships history division. Support for her nomination included her impressive combat history during the Vietnam War and the liberation of Kuwait in 1991.

In accordance with Program Comment procedures of March 5, 2010, the NCSHPO and other historic preservation stakeholders were notified on July 13, 2010, of the Navy's determination that ex-RANGER is eligible for listing in the NRHP. The Navy solicited public comments for a sixty-day period in accordance with the Program Comment procedures and received no responses.

There are steps the Navy shall take under the Program Comment for vessels eligible for listing in the NRHP: (1) give priority to compiling histories of these eligible vessels when preparing entries in the Dictionary of American Naval Fighting Ships (DANFS); (2) retain and provide public access to historical documentation from NRHP eligible vessels such as command operation reports, war diaries, and ship deck logs at the NHHC; (3) in addition to the standard curatorial items removed from the vessel upon decommissioning in accordance with required Navy policy, the Navy would make the vessel available to the Navy Curator and eligible non-profit organizations for removal of additional equipment, parts of the vessel, etc., that contribute to the historical significance of the vessel; (4) within three years of designating a NRHP-eligible vessel for final disposition, deposit with the National Archives and Records Administration documentation consisting of archive-stable media including the Booklet of General Plans and the last report of the Board of Inspection and Survey describing the material condition of the vessel.

To date, the Navy has annotated the vessel's entry in the NVR to reflect listing eligibility which the public can access at http://www.nvr.navy.mil. Documentation consisting of historically significant records pertaining to ex-RANGER is available for viewing at the Naval History and Heritage Command offices. The Navy has assembled an information package of historically significant records for ex-RANGER which will be turned over to the National Archives for preservation. The entry for ex-RANGER in the DANFS is being updated. Curatorial items were removed from ex-RANGER following her decommissioning.

By following this Program Comment, the Navy would meet its responsibilities for compliance with Section 106 of the NHPA concerning the evaluation of vessels for eligibility for listing in the NRHP and the final disposition of eligible vessels.

3.1.3 INACTSHIPMAINTO Bremerton

INACTSHIPMAINTO Bremerton is located on the north side of the Sinclair Inlet on the Kitsap Peninsula and is a tenant of Naval Base Kitsap, on the west side of PSNS. The Suquamish

Indian Tribe's aboriginal land extended along the eastern shore of the Kitsap Peninsula; thus, the facility is in the tribe's territory. However, there is low to no probability for archaeological value at INACTSHIPMAINTO Bremerton given the level of development at the site.

There are several Native American Indian Tribes with treaty rights along the transit to the Pacific Ocean, and along the coast. However, the Proposed Action would not change any Tribe's ability to exercise Tribal treaty rights to access Usual and Accustomed Fishing areas. As discussed elsewhere in this EA/OEA, the Proposed Action would not significantly impact (reduce or degrade) the harvestable marine resources of interest to the Tribes.

The PSNS was designated a National Historic Landmark in 1992., The historic district is a small part of the entire PSNS and includes 22 contributing buildings and 42 contributing structures, as well as 49 non-contributing buildings, structures, and objects (U.S. Department of the Interior, 1991). Ex-RANGER is berthed at a pier which is within the Naval Restricted Area 2 where there is no public access. INACTSHIPMAINTO Bremerton is not located within the historic district of PSNS.

3.1.4 Brownsville, TX

The Port of Brownsville has been in operation since 1936 when the Brownsville Ship Channel (BSC) was originally dredged. It has undergone vast growth since then and can support large vessels. It is not listed in the NRHP.

None of the three IDIQ CV dismantling contractors' facilities in Brownsville, TX, are listed in the NRHP.

3.2 Water Resources Including Coastal Zone Resources

This section describes the existing water resource conditions, including sediment quality in the project area. Surface water includes oceans, bays and estuaries, lakes and ponds, rivers and creeks, and overland precipitation runoff. Sediment quality describes the chemical and physical composition of water and sediment in bodies of water. For the purposes of this analysis, water and sediment quality is evaluated with respect to possible disturbances of existing conditions associated with the proposed project activities. This project is entirely in-water and all considered alternatives are at hard shorelines developed with piers and other facilities; thus, no groundwater would be impacted.

3.2.1 Water Resource Regulations

Water resource regulations focus on the protection of beneficial uses of water within the vicinity of the project area. The principal Federal law protecting water quality is the CWA, as amended (33 U.S.C. § 1251 et seq.), which is enforced by the EPA. Under section 303(d) of the CWA and EPA's Water Quality Planning and Management Regulations (40 C.F.R. Part 130), Sstates are required to develop total maximum daily loads (TMDLs) for impaired water bodies unable to

meet their designated uses. A TMDL "establishes the amount of a pollutant that a water body can assimilate without exceeding its water quality standard for that pollutant."

Washington State jurisdiction over its waters extends out to 3 nm from its coast whereas Texas State jurisdiction in the Gulf of Mexico is 9 nm. Federal jurisdiction regarding water quality extends from 3 to 200 nm along the west coast of the United States and begins 9 nm from shore and extends out to 200 nm for Texas within the Gulf of Mexico. These standards and guidelines are mainly the responsibility of the EPA specifically ocean discharge provisions of the Clean Water Act (33 U.S.C. §11343 et seq.) Ocean discharges may not result in "unreasonable degradation of the marine environment." Specifically, disposal may not result in (1) unacceptable negative effects on human health; (2) unacceptable negative effects on the marine ecosystem; (3) unacceptable negative persistent or permanent effects due to the particular volumes or concentrations of the dumped materials; and (4) unacceptable negative effects on the ocean for other uses as a result of direct environmental impact (40 C.F.R. §125.122.) Section 307(c) of the Coastal Zone Management Act (CZMA) requires that any Federal action that would directly or indirectly affect any land or water use or natural resource of the coastal zone must be consistent to the maximum extent practicable with the applicable state coastal zone management program. The states of Washington and Texas have prepared federally-approved Coastal Management Programs (CMPs).

Section 404 of the Clean Water Act (CWA) requires a permit before dredged or fill material may be discharged into waters of the United States. New or maintenance dredging in a dismantling slip to accommodate ex-RANGER, if required, would be permitted under an existing permit from the ACOE.

The tow route for ex-RANGER would exit the Strait of Juan de Fuca and enter into the U.S. Exclusive Economic Zone (EEZ) when the towing operation reaches 3 nm from the coast of Washington State. An area to be avoided during towing is the Olympic Coast National Marine Sanctuary, designated in 1994, which spans 3,310 square miles of marine waters off the Northern Washington State coast. Federal regulations for this sanctuary are provided at 15 C.F.R. § 922.150.154. See Figure 3.1 which shows the location of the National Marine Sanctuary relative to the Strait of Juan de Fuca, and the offshore border between the United States and Canada.

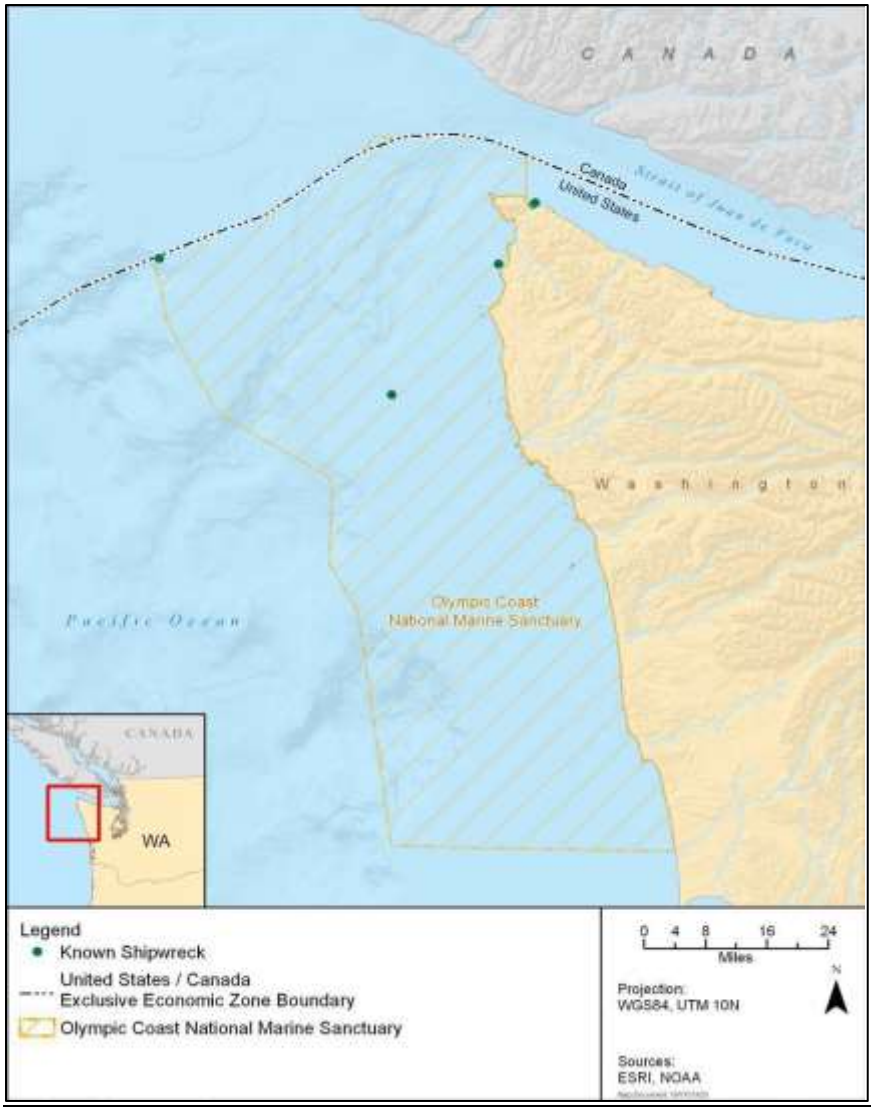

Figure 3.1 – Location of Olympic Coast National Marine Sanctuary (U.S. Navy, 2014)

3.2.2 Water Resources – Affected Environment (Ocean)

The following sections discuss existing marine conditions along the anticipated towing route from INACTSHIPMAINTO Bremerton to a destination in the vicinity of Brownsville, TX.

Water Quality Near Bremerton, WA, Puget Sound and Pacific Ocean, Offshore of Washington State

The towing route would take ex-RANGER into the normal shipping lanes in Sinclair Inlet, through Rich Passage, past Restoration Point, and northerly through the Puget Sound. Nearest to INACTSHIPMAINTO Bremerton, Sinclair Inlet is a 3.5-mile-long shallow, poorly flushing estuary with freshwater input from nearby creeks. While water quality in Sinclair Inlet is considered high enough to support many different recreational uses, it has been detrimentally

affected by runoff and sediment contamination from the surrounding watersheds including such land uses as forest land, highways, urban development, commercial development, and industrial development. The State of Washington has assessed the water quality of Sinclair Inlet and has found certain areas to have evidence of low dissolved oxygen (DO) or elevated levels of fecal coliform. The inlet experiences isolated events of low DO with elevated nutrient concentrations and phytoplankton blooms (WDOE, 2008; in Navy, 2013).

The waters of the Pacific Ocean off the coast of Washington State are largely controlled by (1) Pacific Ocean-wide circulation of water, especially the California Current; (2) major inputs of fresh water and sediment from the Columbia River; (3) formation of large eddies such as is found at the mouth of the Strait of Juan de Fuca; and (4) seasonal prevailing winds (Navy, 2014). The nearby Olympic Coast National Marine Sanctuary's waters have been well studied and provide a baseline for the water quality conditions along the tow route after exiting the Strait of Juan de Fuca. Water quality in the Sanctuary is similar to natural ocean conditions with relatively minor influences from human activities (Office of National Marine Sanctuaries, 2008; in Navy, 2014). There are few point sources of pollution in the sanctuary, and the sparse population of the region has limited nonpoint source pollutants. Potential water quality contaminants for the Sanctuary include petroleum products, pathogens, and other chemicals.

Water Quality in the Western Gulf of Mexico and Nearby Brownsville, TX

The towing route for ex-RANGER would reenter the United States in the Gulf of Mexico off the coast of Brownsville, TX. Waters offshore of the western Gulf of Mexico are considered pristine in comparison to inshore waters, though natural hydrocarbon seeps do account for concentrations of volatile organic carbons found in some deep-water areas. Dissolved oxygen is highest at the water surface due to photosynthesis and atmospheric exchange. The City of Brownsville is located near the U.S.-Mexico border, where the Rio Grande River flows into the Gulf of Mexico. Ship recycling facilities in the vicinity are located within the Port of Brownsville, which is a man-made inlet east of South Padre Island. The Port connects to the Gulf via Brazos Santiago Pass. The (five mile section of the navigation channel) extends from the Port to the Laguna Madre. The remaining twelve mile section of the channel was dredged through coastal prairie and passes adjacent to or through three salt marsh areas (Vadia Ancha, Bahia Grande, and San Martin Lake).

The Laguna Madre, which is a shallow productive lagoon, lies between the mainland and the barrier islands. The Laguna Madre drains most of the Nueces-Rio Grande Coastal Basin (10,442 square miles) and is one of only five hypersaline or negative estuaries in the world. The Laguna Madre is a shallow, bar-built coastal lagoon with limited freshwater inflow and a surface area at mean high tide of 729 square miles. Freshwater inflows to lower Laguna Madre average less than 530,000 acre-feet per year and, an important conduit of freshwater to the lagoon is the BSC. Tides in the Laguna Madre are minimal. Ecologically, the Laguna is characterized as exhibiting hypersaline conditions, barren shorelines with extensive wind-tidal flats, extensive submerged seagrass meadows, and a highly productive fin fishery (TCEQ, 2008).

The BSC is listed as having impairment for bacteria in a 2010 assessment. This impairment may be related to the numerous wastewater treatment plants that discharge to the segment. The ship

channel also exhibits depressed dissolved oxygen based on screening levels (TCEQ, 2012). TMDLs have not been established for this water body.

Historical data from the U.S. Army Corps of Engineers (ACOE) regarding metals, several pesticides, and polycyclic aromatic hydrocarbons, indicate that the water quality in the entrance channel is generally good. Samples collected in April 2004 also indicated that water quality was good (ACOE, 2004). The State of Texas Commission on Environmental Quality reported in 2012 that none of the toxic substances, including arsenic, in sediment samples exceeded criteria (TCEQ, 2012).

3.2.3 Water Resources – Affected Environment – Sediments

Sediment quality near Bremerton, WA

The waterfront area at Bremerton has been significantly altered by industrial development and dredging including the construction of 6 drydocks, 13 piers or wharves, and acres of former tidelands filled and paved to enlarge the installation. Sinclair Inlet exhibits a weak estuarine flushing (i.e. water and sediments stay within Sinclair Inlet instead of being flushed out quickly to other parts of the Puget Sound) along with clockwise current pattern and sediment deposition along the northern shoreline. Weak tide currents move water in and out of the inlet with a maximum velocity of 0.2 to 0.3 knots. This effect and the generally weak nature of these currents make the inlet more depositional than erosional for both mud (silt and clay) and sand-sized particles. Currents are generally not capable of re-suspending bottom sediments.

In 1998, a Sediment Trend Analysis (STA) was performed on samples taken from Sinclair Inlet and the adjacent Port Orchard waterway. This study has been the basis for determination of areas of erosion, stability of sediments (dynamic equilibrium), and deposition of sediments in Sinclair Inlet. In general, muddy sediments show a dominant clockwise pattern with flood-directed transport on the south side of the Inlet and ebb-directed transport on the north side of the Inlet. The STA study demonstrates the sediments throughout Sinclair Inlet do not move with great speed, but do accumulate in certain areas. This is especially true on the northside of the inlet, where the movement of sediments terminates inside the docks and piers of the shipyard (McLaren, 1998).

Surface water and sediment contamination within Puget Sound has been well documented and includes a variety of metals and organic chemicals originating from human sources (WDOE, 2011). In the vicinity of Sinclair Inlet, the marine sediments have been affected by past shipyard operations, leaching from creosote-treated piles, and other activities (U.S.Navy, 2013).

Sediment Quality Near Brownsville, TX

The sediments at the navigation channel consist of deposited sands transported by littoral currents. Sediments in the jettied segment of the Entrance Channel have been regularly sampled for size characteristics between dredging cycles since the early-1990s. The sediment in this channel reach is primarily sand with silt and a small clay fraction. Historical USACE data of this

deposited material in the navigation channel indicate that the sediment quality is good (USACE 2004). Data reported by the State of Texas in 2011 indicated that no water quality criteria for aquatic life use for any of the heavy metals in sediments were exceeded over a period of seven years However, the dissolved oxygen standard for aquatic life use was exceeded in some samples over the same study period (TCEQ, 2011),

3.3 Biological Resources

Biological resources consist of native and nonnative plant and animal species and the habitats in which they occur. As of July 2014, osprey and peregrine falcon nests have been documented onboard ex-RANGER. Consultation with the Washington State Department of Fish & Wildlife (included in the Appendix) confirmed that if ex-RANGER is removed from Bremerton outside of the identified nesting seasons, no permitting is required.

This project would take place entirely in water. The Proposed Action alternative would occur at locations including hard shorelines developed with dismantling slips and other industrial facilities. Thus, the biological resources analysis focuses on riverine and marine resources that may have contact with the vessel during the Proposed Action.

3.3.1 Regulatory Requirements

The Marine Mammal Protection Act (MMPA) protects marine mammals from "take" (harm or harassment). The Federal Endangered Species Act (ESA) protects federally-listed threatened and endangered (T&E) plant and animal species. Threatened and endangered species are defined as those plant and animal species in danger of extinction throughout all or a significant portion of its range, by the United States Fish and Wildlife Service (USFWS), NMFS, or appropriate state agency. The Magnuson–Stevens Fishery Conservation and Management Act (MFCMA) commonly referred to as the Magnuson–Stevens Act (MSA), is the primary law governing marine fisheries management in United States federal waters. The most recent version of the Act, authorized in 2007, includes seven purposes which includes protecting essential fish habitats (EFH). EFH is defined as those waters and substrate necessary to fish for spawning, breeding, feeding, or growth to maturity.

3.3.2 Affected Environment

The potential effects on biological resources at the berthing location, INACTSHIPMAINTO Bremerton, towing in the open ocean, and the representative dismantling location in Brownsville, TX, are presented in subsequent sections that address, for each location, as appropriate: benthic communities, fish and EFH, marine mammals and threatened and endangered species.

3.3.2.1 Benthic Communities

Benthic organisms dwell on mudflats, on the bottom of tidal marshes and open water areas, and on hard surfaces below the intertidal zone. Benthic invertebrates are an important component of

the food chain as they are an important food source for demersal (bottom dwelling) fish, crabs, as well as shorebirds.

Bremerton

Due to poor sediment and water quality, benthic habitat within the project area has very low biodiversity, and is limited to organisms that are tolerant of poor environmental conditions. The benthic community in the vicinity of the ex-RANGER berth would include various invertebrates such as marine worms, snails and bivalves, crustaceans, and sea stars. None of these species are threatened or endangered.

Brownsville

Benthic communities near ship recycling facilities along the BSC will be similar to those found in other parts of the Lower Laguna Madre, which is found between the mainland of South Texas and Padre Island. Salinity is a dominant factor controlling the distribution of estuarine organisms and community composition. The National Oceanic and Atmospheric Administration's (NOAA) Estuarine Living Marine Resources (ELMR) program categorizes faunal distribution in Gulf of Mexico estuaries based on the following three salinity zones: tidal fresh (0.0 to 0.5 ppt), mixing (0.5 to 25 ppt), and seawater (>25 ppt) (Nelson, 1992). In comparison to other Gulf of Mexico estuaries, the Lower Laguna Madre receives minimal freshwater input, with average annual evaporation exceeding mean annual input. The Laguna Madre Estuary was characterized by the ELMR program as having only a seawater (salinity >25 ppt) zone (Nelson, 1992).

NOAA's ELMR program compiled data on ecologically or economically important fauna in Gulf of Mexico estuaries. Several species of shrimp were reported among the dominant invertebrate taxa in the Laguna Madre Estuary. The grass shrimp (*Palaemonetes pugio*) was considered highly abundant, and was frequently found to be among the numerical dominants in the estuary. Pink shrimp (*Penaeus duorarum*), white shrimp (*Penaeus setiferus*), and brown shrimp (*Penaeus aztecus*) were identified as sub-dominants, considered to be abundant in the Laguna Madre (Nelson, 1992). Shrimp have also been reported as dominant invertebrate taxa in surveys conducted within the BSC; white shrimp and brown shrimp were identified as the dominant invertebrate taxa in the BSC. Grass shrimp use the Laguna Madre during all life stages, while the penaeid shrimp (pink, white, and brown) use the estuary as a nursery (Nelson, 1992). Blue crab (*Callinectes sapidus*) is also considered abundant in the Laguna Madre, using the estuary during all life stages. Bay squid (*Lolliguncula brevis*), though not found in large numbers, is considered common. Bay scallop (*Argopecten irradians*), American oyster (*Crassostrea virginica*), Gulf stone crab (*Menippe adina*), and Spiny lobster (*Panulirus argus*) are all present in the estuary, but considered rare (Nelson, 1992). Many of these taxa inhabit estuaries throughout the Gulf of Mexico. Several of these invertebrates are targeted by commercial fisheries in the Gulf of Mexico. EFH for managed invertebrate species is discussed below.

Submerged Aquatic Vegetation (SAV) refers to vascular, rooted, flowering plants that live and grow mostly underwater. The prevalence and health of SAV is largely dependent on water quality and salinity. All five genera of salt-tolerant SAV (*Halodule*, *Thalassia*, *Syringodium*,

Halophila, and *Ruppia*) that occur in Texas waters are found in the Lower Laguna Madre (TPWD, 1999). The Texas Parks and Wildlife Department (1999) reports that the Lower Laguna Madre supports 118,600 acres of seagrass, the largest acreage of seagrass meadows in any Texas bay system. The dominant seagrass species in the Lower Laguna Madre are turtlegrass (*Thalassia testudinum*) and manateegrass (*Syringodium filiforme*). The annual widgeongrass (*Ruppia maritima*) and perennial shoalgrass (*Halodule wrightii*) often occur in mixed beds. Small amounts of clovergrass (*Halophila*), a minor, understory species, are also found in the estuary (TPWD, 1999).

The benthos in the BSC is likely to be influenced by human activities. As a highly industrialized man-made navigational corridor, the BSC is subject to impacts from heavy ship traffic, industrial facilities, and dredging.

3.3.2.2 Fish and Essential Fish Habitat

Bremerton/Puget Sound

The Pacific Fishery Management Council (PFMC) designated Puget Sound "riverine, estuarine, and marine areas used by life stages of managed salmon species and riverine areas found within watershed of documented occurrence" as EFH for the Pacific salmon fishery. The Pacific salmon management unit includes Chinook, coho, and pink salmon. All three species use the marine nearshore environment for rearing as juveniles and migration for both adults and juveniles. The EFH designation for the Pacific salmon fishery in estuarine and marine environments in the state of Washington extends from nearshore and tidal submerged environments within state territorial waters out to the full extent of the exclusive economic zone (200 nm) offshore (PFMC, 2003; in Navy 2013).

While EFH for the above species does exist in Sinclair Inlet, the industrial nature of Naval Base Kitsap has likely reduced the quality of the habitat in this area of Sinclair Inlet.

Brownsville

Near Brownsville, TX, the relatively high salinities of the Laguna Madre estuary, which separates the Gulf of Mexico from the BSC, play an important role in determining the composition of the fish community. Fishes identified as highly abundant in the Laguna Madre were bay anchovy (*Anchoa mitchilli*), hardhead catfish (*Arius felis*), sheepshead minnow (*Cyprinodon variegates*), silversides (*Menidia* species), pinfish (*Lagodon rhomboides*), and spot (*Leiostomus xanthurus*) (Nelson, 1992). Atlantic croaker (*Micropogonias undulatus*) is considered abundant, but not typically among the numerical dominants (Nelson, 1992). Gulf menhaden (*Brevoortia patronus*), Gulf killifish (*Fundulus grandis*), Crevalle jack (*Caranx hippos*), Florida pompano (*Trachinotus carolinus*), sheepshead (*Archosargus probatocephalus*), silver perch (*Bairdiella chrysoura*), striped mullet (*Mugil cephalus*), code goby (*Gobiosoma robustum*), and southern flounder (*Paralichthys lethostigma*) were also considered abundant in the estuary (Nelson, 1992). Common fish that are not typically found in high numbers include snook (*Centropomus undecimalis*), gray snapper (*Lutjanus griseus*), spotted seatrout (*Cynoscion*

nebulosus), black drum (*Pogonias cromis*), and red drum (*Sciaenops ocellatus*). Bull shark (*Carcharhinus leucas*), tarpon (*Megalops atlanticus*), gizzard shad (*Dorosoma cepedianum*), sand seatrout (*Cynoscion arenarius*), Spanish mackerel (*Scomberomorus maculatus*), and Gulf flounder (*Paralichthys albigutta*) are all occasionally found in the Laguna Madre, but are considered to be rare (Nelson, 1992).

The Gulf of Mexico Fisheries Management Council (GMFMC) is responsible for designating EFH in Texas. The GMFMC has designated the entire Gulf of Mexico, which is the nearest major body of water where EFH is designated, as EFH for white shrimp, pink shrimp, brown shrimp, spiny lobster, gulf stone crab, stone crab, gray snapper, red drum, and Spanish mackerel (GMFMC, 2008). It is reasonable to assume that habitat for most of these species occurs in Lower Laguna Madre. All except for stone crab have been reported from the Laguna Madre (Nelson, 1992). No EFH has been identified for the BSC itself.

3.3.2.3 Biological Resources Along the Towing Routes

The primary issue regarding the effects of towing on biological resources is vessel movement that could result in collision between the tug, the tow cable or towed vessel, and marine mammals or sea turtles, particularly those that are threatened or endangered. Preventing collision would depend on detecting the animal in time to take effective action. The NOAA "Vessel Strike Avoidance Measures" are based upon sighting animals and taking action to avoid them, including maneuvering and shifting engines into neutral. In the case of a tug and tow, the ability to take such actions is considerably constrained. Additionally, it is difficult to sight whales or sea turtles during periods of poor visibility especially at night.

3.3.2.4 Threatened and Endangered Species

Table 3-1 contains the list of federally listed threatened and endangered species that may occur in the region of the PSNS and outbound from Puget Sound into the open ocean. Table 3-2 contains the list of federally listed species that may occur in the Pacific Region of the towing route within the waters of the United States. Table 3-3 contains the list of federally listed species that may occur in the Atlantic and the Gulf of Mexico, and Table 3-4 contains the list of federally listed species in the vicinity of Brownsville, TX. Table 3-5 contains a list of the known protected species (threatened or endangered) that inhabit the Strait of Magellan.

Table 3-1 - Federally Listed Species in the Region of Bremerton, WA: PSNS and Outbound from Puget Sound into the Pacific Ocean

Species	Regulatory Agency	Status
Puget Sound Chinook	NMFS	Threatened
Puget Sound Steelhead	NMFS	Threatened
Southern Resident Killer Whale	NMFS	Endangered

Humpback Whale	NMFS	Endangered
Georgia Basin/Puget Sound Bocaccio Distinct Population Segment (DPS)	NMFS	Threatened
Georgia Basin/Puget Sound Yelloweye Rockfish DPS	NMFS	Threatened
Georgia Basin/Puget Sound Canary Rockfish DPS	NMFS	Threatened
Coastal/Puget Sound Bull Trout	USFWS	Threatened

Table 3-2 - Endangered and Threatened Species That May Occur in the Open Ocean (Pacific and/or Atlantic Oceans)

Common name	Scientific name	Status
Blue whale	*Balaenoptera musculus*	Endangered
Fin whale	*Balaenoptera physalus*	Endangered
Humpback whale	*Megaptera novaeangliae*	Endangered
Killer whale	*Orcinus orca*	Endangered[1]
North Pacific right whale	*Eubalaena japonica*	Endangered
Sei whale	*Balaenoptera borealis*	Endangered
Sperm whale	*Physeter macrocephalus*	Endangered
Green turtle	*Chelonia mydas*	Endangered/ Threatened[3]
Hawksbill turtle	*Eretmochelys imbricata*	Endangered[2]
Kemp's ridley turtle	*Lepidochelys kempii*	Endangered
Leatherback turtle	*Dermochelys coriacea*	Endangered
Loggerhead turtle	*Caretta caretta*	Endangered/ Threatened[4]
Olive ridley turtle	*Lepidochelys olivacea*	Threatened[5]

[1] Only the southern resident population in Puget Sound is listed as endangered.
[2] Occurs in the Southwest Region.
[3] As a species, the green turtle is listed as threatened, but the Florida and Mexican Pacific coast nesting populations are listed as endangered.
[4] Nine distinct population segments exist for loggerhead sea turtles. The North Pacific Ocean, South Pacific Ocean, North Indian Ocean, Northeast Atlantic Ocean, and Mediterranean Sea distinct population segments of the loggerhead sea turtle are listed as endangered. The Southeast Indo-Pacific Ocean, Southwest Indian Ocean, Northwest Atlantic Ocean, and South Atlantic Ocean distinct population segments are listed as threatened.
[5] Occurs south of Florida.

Table 3-3 - Threatened and Endangered Species That May Occur in Gulf of Mexico

Common name	Scientific name	Status
Blue whale	*Balaenoptera musculus*	Endangered
Fin whale	*Balaenoptera physalus*	Endangered
Humpback whale	*Megaptera novaeangliae*	Endangered
Sei whale	*Balaenoptera borealis*	Endangered
Sperm whale	*Physeter macrocephalus*	Endangered
Sea Turtles		
Green turtle	*Chelonia mydas*	Endangered/ Threatened[1]
Hawksbill turtle	*Eretmochelys imbricate*	Endangered
Kemp's ridley turtle	*Lepidochelys kempii*	Endangered
Leatherback turtle	*Dermochelys coriacea*	Endangered
Loggerhead turtle	*Caretta caretta*	Endangered/ Threatened[2]
Olive ridley turtle	*Lepidochelys olivacea*	Threatened[3]

[1] As a species, the green turtle is listed as threatened, but the Florida and Mexican Pacific coast nesting populations are listed as endangered.
[2] Nine distinct population segments exist for loggerhead sea turtles. The North Pacific Ocean, South Pacific Ocean, North Indian Ocean, Northeast Atlantic Ocean, and Mediterranean Sea distinct population segments of the loggerhead sea turtle are listed as endangered. The Southeast Indo-Pacific Ocean, Southwest Indian Ocean, Northwest Atlantic Ocean, and South Atlantic Ocean distinct population segments are listed as threatened.
[3]Occurs south of Florida.

Table 3-4 - Threatened and Endangered Species List for Brownsville, TX, Location

Common Name	Scientific Name	Status
Mammals		
West Indian Manatee	*Trichechus manatus*	Endangered
REPTILES		
Loggerhead sea turtle	*Caretta caretta*	Threatened
Kemp's ridley sea turtle	*Lepidochelys kempii*	Endangered
Green sea turtle	*Chelonia mydas*	Threatened
Leatherback sea turtle	*Dermochelys coricea*	Endangered
Hawksbill sea turtle	*Eretmochelys imbricate*	Endangered

Table 3-5 - Protected Species in the Vicinity of the Strait of Magellan

Common Name	Scientific Name
Magellanic penguin	*Spheniscus magellanicus*
Humpback whale	*Megaptera novaeangliae*
Sei whale	*Balaenoptera borealis*
Minke whale	*Balaenoptera bonaerensis*
Orca whale	*Orcinus orca*
Commerson's dolphin	*Cephalorhynchus commersonii*
Peale dolphin	*Lagenorhynchus australis*
Chilean dolphin	*Cephalorhynchus eutropia*

3.3.2.4.1 Threatened/Endangered Species Near Bremerton/Puget Sound

Puget Sound chinook salmon in Sinclair Inlet are predominantly of hatchery origin from the Gorst Creek hatchery. Naturally spawning chinook salmon may occur in Sinclair Inlet on occasion during migration or other movements.

Puget Sound steelhead are found in very small numbers in Sinclair Inlet, as a wild (non-hatchery) population.

Humpback whale sightings were infrequent in Puget Sound and the Georgia Basin through the late 1990s; in 2003-2004, 13 individual humpback whales were sighted in the inside waters of Washington State. Although the total population of humpback whales is limited, there exists a pod of humpback whales that is frequently seen in the region.

The southern resident killer whale distinct population segment is a trans-boundary population that resides, for part of the year, in the protected inshore waters of the Strait of Georgia and Puget Sound (especially in the vicinity of Haro Strait, west of San Juan Island, and off the southern tip of Vancouver Island) principally during the late spring, summer, and fall (Ford, Ellis and Balcomb 1994; Krahn et al. 2004). Pods have visited coastal sites off Washington and Vancouver Island (Ford, Ellis and Balcomb 1994) and are known to travel as far south as central California and as far north as the Queen Charlotte Islands. The overall range of the southern resident killer whale in winter is unknown.

In 2006, critical habitat for the southern resident killer whale was designated by NMFS. This critical habitat includes the Haro Strait, San Juan Islands, Puget Sound, and Strait of Juan de Fuca. These areas comprise of approximately 1,933 square nautical miles (nm^2) (50 CFR Part 226).

Georgia Basin/Puget Sound boccacio have always been rare in the north Puget Sound surveys of the recreational fishery. It is possible that boccacio can occur within Puget Sound. Yelloweye rockfish have been observed infrequently in Puget Sound. NMFS has concluded that canary rockfish occur in low and decreasing abundances in Puget Sound.

Puget Sound bull trout do not have any core populations that occur in any of the streams that empty into Sinclair Inlet.

3.3.2.4.2 Threatened/Endangered Species and Marine Mammals Within Open Ocean Towing Route

The open ocean tow of ex-RANGER would pass through the Pacific Ocean, the South Atlantic Ocean, and into the Gulf of Mexico, without entering the North Atlantic.

Blue whales may occur in the Pacific Ocean and Gulf of Mexico. The blue whale inhabits all oceans and typically occurs near the coast, over the continental shelf, though it is also found in oceanic waters. On the Pacific coast their range includes the California Current System and the open ocean. Their occurrence in the Gulf of Mexico is unlikely.

In the Pacific Ocean, fin whales are common in waters off the California coast and are likely to occur along the tow route in both the Atlantic and Pacific Oceans.

Humpback whales occur in the Pacific and Atlantic Oceans and Gulf of Mexico, and are distributed worldwide in all major oceans and most seas. Their occurrence will be associated with the nearshore waters of the continental shelf and not in the waters of the high seas.

Killer whales occur in the Pacific and Atlantic Oceans and the Gulf of Mexico. Only the distinct population segment of southern resident population in Puget Sound (as described in 3.3.2.4.1) is listed as endangered. Killer whales are found in all marine habitats, from the coastal zone to deep oceanic basins and from equatorial regions to the polar pack ice zones of both hemispheres. There will be a relatively short amount of time during which the tow would transit southern resident killer whale habitat as it travels out of Puget Sound, remaining within the U.S. EEZ as it parallels the coast before moving further offshore.

The North Pacific right whale occurs in the Pacific Ocean; however, the likelihood of a North Pacific right whale being present along the Pacific Ocean portion of the tow route is extremely unlikely based on this species having been observed extremely rarely in recent years. The species does not occur within the Atlantic Ocean or Gulf of Mexico portion of the tow route.

Sei whales occur in the Pacific Ocean, Atlantic Ocean, and Gulf of Mexico; however, they are most often found in deep oceanic waters of the cool temperate zone and are rarely observed near the coast. In the eastern Pacific, their range extends to the area off of Baja California. Their occurrence in the Gulf of Mexico is uncommon, although they are likely to occur along the Atlantic and Pacific Ocean portions of the tow route.

Sperm whales occur in the Pacific and Atlantic Oceans and the Gulf of Mexico. They are found in polar to tropical waters in all oceans and are therefore likely to occur with all sections of the tow route especially along the portions of the transit along the continental shelf and slope.

The green sea turtle occurs in the Pacific and Atlantic Oceans and the Gulf of Mexico and is distributed worldwide across tropical and subtropical coastal waters. However, they are more likely to occur in the continental shelf and warm shallow waters throughout the towing route but are not likely to occur in the high seas.

Hawksbill sea turtles occur in the Pacific and Atlantic Oceans and the Gulf of Mexico. While hawksbills are known to occasionally migrate long distances in the open ocean, they are primarily found in coastal habitats and use nearshore areas more exclusively than other sea turtles. Although they may occur in the open ocean throughout the towing route, their highest density is expected within the Gulf of Mexico.

Kemp's ridley sea turtles occur in the Atlantic Ocean and Gulf of Mexico; however, they are not expected along the Pacific Ocean portion of the towing route.

Leatherback sea turtles occur in the Atlantic and Pacific Oceans and the Gulf of Mexico. The leatherback turtle is the most widely distributed of all sea turtles, found from tropical to subpolar oceans. In the eastern North Pacific Ocean, leatherback turtles are broadly distributed from the tropics to as far north as Alaska, and are present in the California current system. Leatherback sea turtles are likely to occur throughout the towing route; however, their highest density is expected over the continental shelf and shallower coastal waters.

Loggerhead sea turtles occur in the Pacific and Atlantic Oceans and Gulf of Mexico. Their habitats range from coastal estuaries to waters beyond the continental shelf. Pacific Ocean loggerheads are known to use the entire North Pacific Ocean during development, and they embark on transoceanic migrations, having been reported as far north as Alaska and as far south as Chile. Thus, although they are primarily concentrated in warmer waters, their known open ocean migrations suggest that they would cross the proposed transit route once in the high seas.

Olive ridley sea turtles occur south of Florida in the Atlantic Ocean, Gulf of Mexico, and Pacific Ocean. Most olive ridley turtles lead a primarily open ocean existence. In the open ocean of the eastern Pacific Ocean, olive ridley turtles are often seen near floating debris. Thus, they are likely to occur along the tow routes in the open ocean with densities being higher in warm waters.

Certain ESA-listed corals within or near the Gulf of Mexico may be in the vicinity of the proposed tow route for ex-RANGER from Bremerton, WA, to Brownsville, TX (NMFS, 2014). The species of corals are as follows:

- Staghorn coral (*Acropora cervicornis*)
- Elkhorn coral (*Acropora palmate*)
- *Dendrogyra cylindrus*
- *Mycetophylia ferox*
- *Orbicella annularis*
- *Orbicella faveolata*
- *Orbicella fransk*

3.3.2.4.3 Threatened/Endangered Species and Marine Mammals Near Brownsville, TX

West Indian manatees are found in rivers, estuaries, and coastal areas of the tropical and subtropical New World from the southeastern U.S. coast, along Central America and the West Indies, to the northern coastline of South America. Manatees are extremely rare in Texas and are thought to be wanderers from the Florida or Mexican populations. Although the possibility exists that manatees could be found in the BSC, it is especially unlikely that manatees would occur in this developed area with limited food resources.

Loggerheads are capable of living in a variety of environments, such as in brackish waters of coastal lagoons, river mouths, and tropical and temperate waters above 50 degrees Fahrenheit. In Texas, they are found in the Gulf of Mexico and are occasional visitors to the Texas coast.

Only minor and solitary nesting has been recorded along the coasts of the Gulf of Mexico (TPWD, 2009).

Kemp's Ridley sea turtles are found in the coastal waters and bays of the Gulf of Mexico and Atlantic Ocean. Adults essentially are restricted to the Gulf of Mexico, but immature turtles inhabit the Gulf and also the U.S. Atlantic coast. A nesting beach at Rancho Nuevo, Tamaulipas, Mexico is the primary nesting site for these turtles. It is the only known major nesting beach for this species in the world. A secondary nesting population has been established on Padre Island National Seashore and has had limited success.

Green sea turtles feed in shallow water areas with abundant seagrasses or algae. The major nesting beaches are always found in places where the seawater temperature is greater than 77 degrees Fahrenheit. Green sea turtles are found in the Gulf of Mexico and they occasionally visit the Texas coast (TPWD, 2009).

Leatherback sea turtles prefer the open ocean and move into coastal waters only during the reproductive season. Leatherbacks inhabit primarily the upper reaches of the open ocean, but they also frequently descend into deep waters from 650 to 1650 feet in depth. The leatherback sea turtle occurs in the Gulf of Mexico, but is a rare visitor to the Texas Gulf Coast.

Hawksbill sea turtles are found primarily in warmer waters of the Atlantic, Pacific, and Indian Oceans from Japan to Australia and the British Isles to southern Brazil. They are also found in the southern waters of Florida, the Gulf of Mexico, and the Caribbean. In Texas, the hawksbill is found in the Gulf of Mexico and occasionally on the Texas coast (TPWD, 2009).

Sea turtles may be found along the transit route, but are not expected in the vicinity of the dismantling facility.

3.4 Air Quality/Climate Change

The air pollutants that are considered in this analysis include volatile organic compound (VOCs) and NOx, which are precursors to ozone formation, as well as particulate matter less than 2.5 microns in diameter ($PM_{2.5}$).

3.4.1 Regulatory Setting

Air quality in a given location is defined by pollutant concentrations in the atmosphere and is generally expressed in units of parts per million (ppm) or micrograms per cubic meter (μg/m3). One aspect of significance is the concentration of a pollutant in comparison with the national and/or state ambient air quality standard. These standards represent the maximum allowable atmospheric concentrations that may occur and still protect public health and welfare with a reasonable margin of safety. The national standards, established by the EPA, are termed the National Ambient Air Quality Standards (NAAQS). The NAAQS represent maximum acceptable concentrations that generally may not be exceeded more than once per year, except

the annual standards, which may never be exceeded. The six criteria pollutants are ozone (O_3), CO, NO_2, particulate matter (PM), SO_2, and lead (Pb).

The EPA designates all areas in the country as nonattainment, attainment, maintenance, or unclassifiable with respect to the NAAQS for each criteria pollutant:

- Areas that violate ambient air quality standards are designated as nonattainment areas;
- Areas that comply with Federal air quality standards are designated as attainment areas;
- Areas that have improved air quality from nonattainment to attainment are designated as maintenance areas;
- Areas that lack monitoring data to demonstrate attainment or nonattainment status are designated as unclassified and are considered to be in attainment for regulatory purposes.

Varying levels of nonattainment have been established for ozone, CO, and PM_{10} to indicate the severity of the air quality problem (i.e. the classifications runs from marginal to extreme for ozone; moderate to serious for CO).

The CAA requires each state to develop, adopt and implement a State Implementation Plan (SIP) to achieve, maintain, and enforce Federal air quality standards throughout the state. SIPs are developed on a pollutant-by-pollutant basis whenever one or more air quality standards are being violated (nonattainment). Under the EPA's General Conformity Rule (40 C.F.R. § 93), Federal agencies must determine whether the action is exempt from a Conformity Determination or conforms to the applicable SIP. The Conformity Rule applies only to areas in nonattainment. Actions are exempt when the total of all reasonable foreseeable direct and indirect emission would be: 1) less than the *de minimis* emission threshold, and 2) less than ten percent of the area's annual emission budget. If these conditions are met, the requirement for conformity determination is not applicable. In addition, the Conformity Determination Rule contains a number of specific Federal activities that are exempted from Conformity Determination because they will either result in no or *de minimis* increases in emissions (40 C.F.R. § 93(c)(2)).

3.4.1.1 Greenhouse Gas Emissions/Climate Change

A greenhouse gas (GHG) is defined as a gas in the atmosphere that absorbs and emits radiation within the thermal infrared range. GHGs are regulated as air pollutants under the CAA. The Environmental Protection Agency is using its CAA authority to regulate mobile sources as well as major new or modified sources of greenhouse gases (GHGs).

CAA Section 111 performance standards, are designed and promulgated through a federal-state partnership. Under section 111(d), EPA is authorized to approve a minimum federal "backstop" for regulations, and then allow states to control GHG emissions above and beyond that backstop.

3.4.2 Bremerton, WA

The Puget Sound Clean Air Agency (PSCAA) has jurisdiction over air quality in King, Kitsap, Pierce, and Snohomish counties. PSCAA monitors and regulates levels of criteria air pollutants

along with the Washington State Department of Ecology to assure the region meets federal air quality standards.

Washington State has adopted a set of coordinated policies to reduce greenhouse gas emissions including Executive Order 07-02 the Washington Climate Change Challenge, signed in February 2007, which established goals for reducing greenhouse gas emissions, and reducing fuels spending, and Executive Order 09-05, Washington's Leadership on Climate Change, signed in May 2009, which requires the state to develop emission reduction strategies to help meet the state's statutory greenhouse gas reduction limits. None of the Washington State initiatives would directly impact the quantities of air emissions resulting from towing ex-RANGER out of Bremerton.

3.4.3 Brownsville, Texas

Ship recycling facilities are located in Cameron County within the EPA's Brownsville-Laredo Air Quality Control Region (AQCR). This region is one of a nationwide system of AQCRs established by the EPA for air quality planning purposes (40 C.F.R. Part 81) and is designated as AQCR No 213. The Brownsville-Laredo Intrastate AQCR includes the counties of Cameron, Hidalgo, Jim Hogg, Starr, Webb, Willacy, and Zapata.

The State of Texas does not have a Federally recognized program to control GHGs.

3.4.4 Offshore Towing Routes

The CAA does not extend beyond 12 nm for territorial waters. For the purpose of this analysis, compliance with air quality regulations is a consideration only within the 12 nm limit of Washington or Texas.

4.0 ENVIRONMENTAL CONSEQUENCES

This chapter evaluates the potential for the proposed action to result in environmental consequences to cultural resources, water resources, biological resource, and air resources.

4.1 Cultural Resources

According to 36 C.F.R. § 800.5(a)(1), an adverse effect results "when an undertaking may alter directly or indirectly any of the characteristics of a historic property that qualify the property for inclusion in the National Register in a manner that would diminish the integrity of the property's location, design, setting, materials, workmanship, feeling, or association." Dismantling a vessel that is eligible for listing in the NRHP constitutes an adverse effect under these criteria.

Artifacts were removed from ex-RANGER upon decommissioning by the Navy Curator in accordance with OPNAVINST 4770.5H; this is a standard procedure for every decommissioned ship. The Navy evaluated the eligibility of ex-RANGER to be listed in the National Register of Historic Places (NRHP) under the 2010 Navy Program Comment process. Ex-RANGER is eligible for listing in the NRHP. Pursuant to the 2010 Navy Program Comment, the Navy shall follow the procedures discussed in section 3.1.2 to mitigate the adverse effect resulting from the proposed Federal undertaking, and therefore will satisfy its obligation under section 106 of the NHPA.

4.1.1 Bremerton, WA

The removal of the vessel would not impact any historic districts at or near INACTSHIPMAINTO Bremerton, as the removal of this vessel would not affect the context or integrity features of any properties and is not a contributing element of the historic districts. Furthermore, there would be no effect on Indian fishing rights that are farther out in Sinclair Inlet. The removal of the vessel does not require dredging in Bremerton so there would be no impact on any submerged maritime archaeological sites near Bremerton.

Therefore, pursuant to the NHPA, the Navy has concluded that the Proposed Action would have an adverse effect on ex-RANGER; however, the Navy will implement measures as described in the Program Comment to mitigate this adverse effect. In accordance with NEPA, the Proposed Action would have no significant impact on other cultural resources at INACTSHIPMAINTO Bremerton.

There are several Native American Indian Tribes with treaty rights along the transit to the Pacific Ocean, and along the coast. However, the Proposed Action would not change any Tribe's ability to exercise Tribal treaty rights to access Usual and Accustomed Fishing areas. Thus, there would be no significant impacts to Tribal culture.

4.1.1 Brownsville, TX

New or maintenance dredging of a dismantling slip at the selected contractor's facility may occur under existing permitting with the ACOE to accommodate ex-RANGER as the second aircraft carrier to be awarded to the selected contractor. Previous dredging at the three aircraft carrier dismantling contractors' facilities did not result in any impacts on submerged maritime archaeological sites, as there are no known submerged maritime archaeological sites in this area. Furthermore, none of the dismantling facilities near Brownsville, TX, are listed or are eligible for listing in the NRHP. Pursuant to NHPA, the Navy has determined that implementing the Proposed Alternative at a facility near Brownsville, TX, would have no effect on cultural resources. In accordance with NEPA, the Navy has determined that this alternative would have no significant impact on cultural resources at the dismantling facility.

4.1.2 No-Action Alternative

Under the No-Action Alternative, the ship would remain in INACTSHIPMAINTO Bremerton, and the cultural resource (i.e., ex-RANGER) would be retained. The ship would remain in a safe stowage condition (i.e., fire and flooding protection). Pursuant to NHPA, the Navy has determined that the no-action alternative would have no effect on cultural resources. In accordance with NEPA, the Navy has determined that the no-action alternative would have no significant impact on cultural resources.

4.2 Water Resources Including Coastal Zone Resources

4.2.1 INACTSHIPMAINTO Bremerton/Puget Sound and Towing in Open Ocean

The Proposed Action does not require a discharge permit, thus the impact on water resources would be minor and temporary from towing within the vicinity of INACTSHIPMAINTO Bremerton. Potential impacts include bottom sediment disturbance and surface water turbidity resulting from towing operations. In general, vessel operation may cause sediment resuspension through the generation of surface wakes and propeller wash. However, these effects would be expected to be minor and temporary with a return to preexisting water quality conditions following the departure of ex-RANGER from its berthing location.

In 2011, the Navy contacted the Washington Department of Ecology regarding the removal of a similar aircraft carrier, ex-CONSTELLATION, from INACTSHIPMAINTO Bremerton, and this agency concurred (via email on July 14, 2011) that there would not be an impact on any coastal use or natural resource of the coastal zone. The email correspondence is included in the Appendix. As the removal and tow of ex-RANGER from Bremerton is duplicative to the removal and tow of ex-CONSTELLATION, the Navy has concluded that there would be no impact to towing ex-RANGER to any coastal use or natural resource of the coastal zone of the State of Washington.

Towing ex-RANGER in the open ocean will not affect open ocean conditions and will not cause any significant impact thereof. As the towing operations will generally be conducted in deep water and in compliance with applicable wake and speed limits, the impact on sediment re-suspension will be minor. Towing could pose a risk to water quality if substantial quantities of paint from the underwater hull is released into the environment. However, the low towing speed mitigates any risk of scouring the hull by water during tow, as the paint system is designed to remain intact during much higher speeds of an operational ship.

Therefore, in accordance with the CZMA, the Navy has determined that the Proposed Action would have no effect on any coastal use or resources in the Washington State coastal zone; nor would the Proposed Action result in any significant impacts under NEPA. Furthermore, in accordance with NEPA, the Proposed Action would not have a significant impact on water resources at the Bremerton, WA, berthing location.

4.2.2 Brownsville, TX

Potential impacts to water resources from towing the vessel to Brownsville, TX are similar to those described under INACTSHIPMAINTO Bremerton.

While there is the potential for bottom sediment disturbance and surface water turbidity due to the generation of surface wakes and propeller wash, the Proposed Action is not expected to significantly impact water and sediment quality. Any impacts are expected to be minor and temporary with a return to preexisting conditions soon after the vessel is brought into its dismantling slip.

Further, the Navy's aircraft carrier dismantling contracts have a clause that requires the contractor to comply with all applicable Federal, state, and local environmental and safety and health laws and regulations, which would include ascertaining all of the necessary regulatory permits associated with protecting the environment. The dismantling/recycling would occur at an existing industrial facility that is capable of the operations. Therefore, it is not anticipated that the contractor would need to obtain any additional regulatory permits in order to perform the requirements of the contract.

The towing route would take the vessel into the coastal zone of Texas. No construction would be required to tow ex-RANGER through the BSC to a dismantling facility; however, some new or maintenance dredging may be needed to expand the length and width of an existing dismantling slip depending on which contractor is selected. Should new or maintenance dredging be necessary, it would be conducted by the dismantling contractor in accordance with existing permits with the ACOE (ACOE, 2012).

The Navy informally consulted with the State of Texas regarding the towing of one or more inactive vessels to dismantling facilities near Brownsville, TX. It was determined that no coastal zone management consistency review would be required by the State of Texas (State of Texas, 2014) (See Appendix).

Therefore, in accordance with the CZMA, the Navy has determined that the Proposed Action would have no effect on any coastal use or resource of Texas' coastal zone. Furthermore, in accordance with NEPA, the Proposed Action would not have a significant impact on water resources at the Brownsville, TX, alternative location.

4.2.3 No-Action Alternative

Under the No-Action Alternative, ex-RANGER would not be dismantled and would not be removed and towed from INACTSHIPMAINTO Bremerton. The ship would continue to be maintained in safe stowage (fire and flooding protection). Under CZMA, there would be no effect on any coastal use or resource of the coastal zone of Washington State. Under NEPA, no significant impacts to water resources would occur.

4.3 Biological Resources

Table 4-1 provides a summary of the impacts of the Proposed Action and the No-Action Alternative to biological resources by location; i.e., INACTSHIPMAINTO Bremerton/Puget Sound, the towing in the waters of the open ocean, and a potential dismantling facility located in or near Brownsville, TX. More detailed information on the environmental consequences of the Proposed Action to biological resources is presented in the following sections.

Table 4-1 - SUMMARY OF IMPACTS BY LOCATION

Resource Area	Brownsville, TX	INACTSHIP-MAINTO Bremerton/Puget Sound	Open Ocean
Benthic Community	Temporary impacts; no significant impacts	Temporary impacts, no significant impacts	N/A
Fish and Essential Fish Habitat	Temporary impacts to fish; no effect on EFH; no significant impacts	Temporary impacts to fish, no effect on EFH; no significant impacts	Temporary impacts to fish; no effect on EFH; no significant impacts; no significant harm

Resource Area	Brownsville, TX	INACTSHIP-MAINTO Bremerton/Puget Sound	Open Ocean
Threatened & Endangered Species/Marine Mammals	May affect, but not likely to adversely affect threatened and endangered species; no reasonably foreseeable takes of marine mammals; no significant impacts	May affect, but not likely to adversely affect threatened and endangered species; no reasonably foreseeable takes of marine mammals; no significant impacts	May affect, but not likely to adversely affect threatened and endangered species; no reasonably foreseeable takes of marine mammals; no significant impacts; no significant harm

4.3.1 INACTSHIPMAINTO Bremerton/Puget Sound

Benthic communities

Potential direct impacts to benthic communities may result from effects of propeller wash and exposure to contaminants. Turbidity and siltation associated with propeller wash would be minor, local and transient and minimized by the very slow speeds of the towed vessels near shore.

Due to poor sediment and water quality, benthic habitat within the project area has very low biodiversity, and is limited to organisms that are tolerant of poor environmental conditions. The larger, more mobile benthic megainvertebrates, would be able to flee the area during towing. Benthic organisms are generally very resilient to habitat disturbance and will quickly recover to pre-disturbance levels. There may be indirect beneficial impacts on marine vegetation by opening up the substrate to sunlight and promoting the establishment of vegetation and algae.

The towing of the vessel would result in minor to no impacts to the benthic community because of the deep water in which the vessel is berthed. The approvals, inspections, and special procedures associated with maintaining a license to tow, as well as compliance with U. S. Coast Guard requirements, would further reduce the potential for impacts.

There are no known threatened or endangered species associated with the benthic community near INACTSHIPMAINTO Bremerton. In accordance with NEPA, the Navy has determined that the Proposed Action would have no significant impact on benthic communities at this location.

Fish and Essential Fish Habitat

Contaminant exposures and re-suspended sediments from towing are potential impacts to fish including, at Bremerton and more generally, within Puget Sound, salmon EFH. Minor to no impact is anticipated for mobile fish species that can readily avoid the temporary disturbance and potentially increased turbidity in the water column that may occur because of towing activities. The Proposed Action would have no effect on fish EFH as defined by the MSA at this location. Overall, the Navy has determined that the Proposed Action would have no significant impact on EFH at this location.

Threatened and Endangered Species and Marine Mammals

Pursuant to section 7 of the ESA, the NMFS determined that the Proposed Action may affect but will not adversely affect threatened and endangered species including certain whale and sea turtle species. The potentially affected species may be present in Puget Sound as a whole (NMFS, 2014); however it is less likely that the threatened and endangered species discussed in the biological evaluation would occur in the immediate vicinity of INACTSHIPMAINTO Bremerton.

In accordance with the MMPA, the Navy has determined that the Proposed Action would not result in any reasonably foreseeable takes of marine mammals because marine mammals are not expected to be present in the immediate vicinity of ex-RANGER's berthing location. During towing within Puget Sound, some marine mammals may be present; however, no takes are anticipated. Thus, pursuant to NEPA, the Navy has determined that the Proposed Action would have no significant impact on threatened or endangered species and marine mammals in the vicinity of INACTSHIPMAINTO Bremerton or elsewhere in Puget Sound.

4.3.2 Towing in the Open Ocean

Fish and Essential Fish Habitat

Minor to no impact is anticipated for mobile fish species that can readily avoid the temporary disturbance and that may occur because of towing activities. The vessel is not expected to come into contact with EFH during the tow in the open ocean as planned. Therefore, in accordance with the Magnuson-Stevens Act (MSA), the Navy has determined that the Proposed Action would have no effect on EFH in the open ocean and there would be no significant impact/no significant harm on EFH under NEPA.

Threatened and Endangered Species and Marine Mammals

On July 8, 2014, pursuant to Section On July 8, 2014, pursuant to Section 7(a)(2) of the Endangered Species Act, the Inactive Ships Office began informal programmatic consultation with the National Oceanic and Atmospheric Administration, National Marine Fisheries Service to evaluate the level of risk to biota that would be associated with towing inactive vessels through the waters of the United States and overseas. This initial consultation had been preceded

by research conducted by the Navy's subject matter experts on towing and the potential injuries to whales and other biota that could occur during the towing of Navy inactive vessels. Tables 3-2 and 3-3 present a list of Endangered and Threatened Species developed by the Navy for the Proposed Action and presented to the NMFS as part of the Navy's consultation. These species may occur in the Pacific Ocean, the Atlantic Ocean or Gulf of Mexico for the Proposed Action. On Nov 17, 2014, NMFS agreed with the Navy's finding that towing of the ex-RANGER may affect, but is not likely to adversely affect, listed threatened or endangered species or critical habitats designated under the Endangered Species Act (ESA) as a result of ship strikes, vessel sinking, and invasive species transfer. In addition, the Navy has determined the Proposed Action would result in no reasonably foreseeable takes of marine mammals pursuant to the Marine Mammal Protection Act (MMPA).

Towing ex-RANGER to a dismantling facility does include the risk of vessel strikes to, whales, and sea turtles. Small whales and delphinids are much less vulnerable to vessel strikes because of their behaviors and agility; on the other hand, large whales basking at the surface and sea turtles are most vulnerable to vessel strikes in the open ocean.

As manatees spend most of their time near shore and the Proposed Action would occur offshore or in designated shipping channels, under the ESA, the Proposed Action would have no effect on manatees and under the MMPA there would be no reasonably foreseeable takes. Thus, the discussion on environmental consequences to biota from towing in the open ocean focuses mainly on potential impacts to large whales and sea turtles.

Vessel speed, size, and mass are all important factors in determining potential impacts of a vessel strike to marine mammals. Preventing vessel strikes would depend on detecting an animal on collision course in time to effective action. Effective actions recommended in the NOAA/NMFS *Vessel Strike Avoidance Measures for Mariners* include maneuvering and shifting engines into neutral. In the case of a tug and tow, the ability to take such actions is considerably constrained. Additionally, it is difficult to sight whales or sea turtles during periods of poor visibility especially at night. Sighting sea turtles may be difficult even under ideal circumstances, but secondary indicators such as floating mats of vegetation or debris are useful substitutes.

Despite the practical difficulty of implementing vessel strike avoidance measures at a moment's notice, the slow speed of a large tug and tow operation significantly reduces the chance of an encounter along the proposed tow routes resulting in serious injury. (NUWC, 2012; Wilson, 2014). The most susceptible species during the tow of ex-RANGER are sperm whales which may be present at the surface. Further, all species of sea turtles are considered vulnerable.

Laist et al. (2001) reported that most lethal or severe injuries among whales struck by ships involve vessels traveling at 14 knots or faster. Silber et al. (2010) reported that hydrodynamic modeling experiments showed a linear relationship between vessel speed and the accelerations experienced by vessel-struck whales, and concluded that limits on vessel speed may increase response time for a whale attempting to maneuver away from a vessel. In experiments on green sea turtles' responses to oncoming boats, greater vessel speed increased the probability that turtles would fail to flee from the approaching vessel, leaving the turtle more vulnerable to

collision (Hazel et al. 2007). However, it is unlikely that vessels involved in the proposed action will achieve speeds of over 8 knots throughout the course of the tow; speeds of between 6 and 8 knots are typical. Based upon the slow speed of the tug and tow along with the relatively short periods they would be transiting habitats where the most susceptible species (Sperm whales and sea turtles) are most likely to be encountered, the Navy concludes that this action may affect but is not likely to adversely affect ESA-listed marine mammals and sea turtles.

Oil and chemical pollution from sunken vessels represents a persistent problem in the marine environment (Monfils et al. 2006) and has the potential to affect listed species and critical habitats. There is the potential for the contracted tug or towed vessel to sink as part of the proposed action, and for oil or chemical pollution to enter the marine environment and affect listed species and critical habitats as a result of vessel sinkings. However, the sinking of a tug or towed inactive Navy vessel from one port to another as part of the towing of inactive ships has never been documented. Based on the lack of ship sinkings throughout the history of the program, and taking into account the limited scale of the proposed action, the risk of oil or chemical discharge from potentially sunken vessels is so low as to be discountable.

Aquatic invasive species represent a persistent and increasing problem throughout the world's oceans, including the waters of the U.S. Ocean-going vessels have the potential to affect ESA-listed species and critical habitats through the introduction of invasive species. The ecosystems into which these invasive organisms are introduced often lack the conditions that limit range expansion in their natural habitats (e.g., predators, pests, or diseases). This factor, accompanied by characteristics such as high reproductive rates, the ability to utilize a variety of resources, and wide tolerances to a range of environmental conditions, allow invasive species to spread quickly following introduction, potentially resulting in serious impacts to listed species and critical habitats which may lack the evolutionary adaptations necessary to cope with these invasive species. Consequences of invasion to ESA-listed species and critical habitats may include predation of native species, competition for food or space, hybridization, and the introduction of harmful pathogens and parasites.

The towing of the ex-RANGER has the potential to affect ESA-listed species through the transmission of aquatic invasive species via one of two vectors: (1) invasive species could be taken in with ballast water at the origination port and later discharged at the destination port; or (2) invasive species may attach themselves to the hull of a vessel (biofouling) at the origination port and be transported on the ship's hull to the destination port. Invasive species are unlikely to be taken in with ballast water at the origination port and later discharged at the destination port because engineering plants of inactive ships are secured so the vessels are non-operational. Without the capability to run pumps, no water may be taken onboard or discharged before or during the transit between ports. The privately owned and operated tug boat will operate under all laws and regulations reducing the risk of introducing invasive species through ballast water. Therefore it is extremely unlikely (to the point of being discountable) that invasive species would be taken in with ballast water and later released at the destination port as part of the action.

The introduction of invasive species via hull biofouling would primarily be a concern to ESA-listed species and critical habitats in the locations of the Port of Brownsville. However, section

3.3.2.4.4 provides information on the certain ESA-listed corals within or near the Gulf of Mexico which may be in the vicinity of the proposed tow route for ex-RANGER. Biofouling organisms that dislodge from a towed ship hull while over coral reef ecoregions have some potential to land on hard substrates amenable to their introduction and become established. Given the duration of time towed ex-RANGER will be over coral ecoregions occupied by ESA-listed species (between 88 and 130 hrs) it is likely some biofouling organisms will become dislodged from the towed ex-RANGER within these areas at these times. However, the slow speed of towed ex-RANGER and the fact most loosely attached organisms will likely become dislodged early during the transit or when the vessel first reaches its maximum speed may minimize the quantity of organisms dislodged over ESA-occupied coral reef ecoregions near the Gulf of Mexico. To become established, biofouling organisms would need to dislodge from towed vessels, land on hard substrate, be tolerant of the physiochemical properties of the habitat, be abundant enough and in high enough density to reproduce, and compete for resources with already established organisms. Further, the establishment of biofouling organisms on reef ecosystems does not necessarily indicate negative effects to ESA-listed species will occur. The NMFS concluded that the one-time transit of ex-RANGER near coral reefs presents a low risk (discountable) of adverse effects (NMFS, 2014).

On July 8, 2014, pursuant to section 7(a)(2) of the Endangered Species Act, the Inactive Ships Office began informal programmatic consultation with the National Oceanic and Atmospheric Administration, National Marine Fisheries Service (NMFS) to evaluate the level of risk to biota that would be associated with towing inactive vessels through the waters of the United States and overseas. This initial consultation had been preceded by research conducted by the Navy's subject matter experts on towing and the potential injuries to whales and other biota that could occur during the towing of Navy inactive vessels.

In the July 8, 2014, request for informal consultation, the Navy presented NMFS with lists of Endangered and Threatened species for the Proposed Action as part of the Navy's consultation. These species may occur in the Pacific Ocean, the Atlantic Ocean or Gulf of Mexico for the Proposed Action. NMFS' letter to the Navy of November 17, 2014, agreed with the Navy's finding that towing ex-RANGER may affect, but is not likely to adversely affect, listed threatened or endangered species or critical habitats designated under the Endangered Species Act (ESA). The Proposed Action would result in no reasonably foreseeable takes of marine mammals pursuant to the Marine Mammal Protection Act (MMPA).

In addition, the November 17, 2014, letter of concurrence from NMFS, concluded that:

> After review of the proposed action including minimization measures, using substantive requirements of ESA section 7 and using the best scientific and commercially available data, we determined the likelihood that a vessel strike or encounter with the tow cable will occur is so low as to be discountable, due to the slow speed of the tug and towed vessel in concert with the relatively short period that the [vessel] will be transiting habitats. We also determined that the likelihood of invasive fouling species establishing new populations in the Port of Brownsville, those species spreading from the Port of Brownsville by natural or anthropogenic means, and of those species resulting in direct or

indirect effects to listed species, is so low as to be discountable. We also determined that the likelihood of the tug and/or tow sinking and resulting in pollution of the marine environment, and that pollution affecting listed species or critical habitats, to be so low as to be discountable.

In accordance with the informal consultation held between the Navy and NMFS and pursuant to the November 17, 2014, concurrence letter, the Navy would employ the following mitigation measures as part of the Proposed Action:

- Whenever marine mammals or sea turtles are sighted, the tug's crew will increase vigilance and take reasonable and prudent actions to avoid collisions and other activities that might result in close interactions between the vessels and animals. Actions may include changing speed and/or direction as dictated by environmental and other conditions (e.g., safety, weather). The Navy will ensure crew are adequately trained to spot and identify marine mammals and sea turtles.

- The tug and tow will avoid Dynamic Management Areas (DMA) for right whales to the maximum extent practicable. If towing is to occur within a DMA, the tug and tow will reduce speeds to 10 knots or less while transiting through these areas in accordance with 50 CFR 224.105, 9 December 2008. Tugboat operators would be required to follow the NOAA/NMFS *Vessel Strike Avoidance Measures and Reporting for Mariners* to reduce the potential of vessel strikes to marine species. Navigational lookouts would be alert for marine mammals entering the line of travel for the vessel.

- Any interactions between contracted tug vessels and listed species will be logged by contracted tug operators. Data from these logs will be reported annually to the NMFS Office of Protected Resources.

The letter of concurrence from NMFS also requested that, should it be determined during towing that unanticipated behavioral harassment or injury of threatened or endangered species has occurred, NAVSEA shall re-initiate consultation with the NMFS Office of Protected Resources, Endangered Species Act Interagency Cooperation Division, to develop and implement mitigation to avoid additional take or initiated formal consultation in accordance with ESA section 7(a)(2).

In the open ocean, pursuant to section 7 of the ESA, towing may affect, but is not likely to adversely affect whales (Blue whale, *Balaenoptera musculus*; Fin whale, *Balaenoptera physalus*; Humpback whale, *Megaptera novaeangliaie*; Sei whale, *Balaenoptera borealis*, Sperm whale, *Physteter macrocephalus*) sea turtles (Green turtle, *Chelonia mydas*; Hawksbill turtle, *Eretmochelys imbricate*; Kemp's ridley turtle, *Lepidochelys kempii*; Leatherback turtle, *Demochelys coriacea*; Loggerhead turtle, *Caretta caretta*; and Olive ridley turtle, *Lepidochelys olivacea*) as listed in Tables 3-2 and 3-3. The tow route in the open ocean as planned is not expected to come into contact with EFH.

For all other threatened or endangered species that may be present along the towing routes, there would be no effect under section 7 of the ESA (See Tables 3-1, 3-2, 3-3, and 3-4). Under the MSA, the towing portion of the Proposed Action would have no effect on EFH in the open ocean of the Pacific, and Gulf of Mexico. Under MMPA, there would be no foreseeable takes of marine mammals. Pursuant to NEPA and E.O. 12114, the Proposed Action, subject to the mitigation actions described above, would have no significant impact to, and would not result in significant harm to marine mammals and threatened and endangered species during towing in the open ocean of the Pacific, the South Atlantic, the Caribbean Sea, or the Gulf of Mexico.

See Table 4-1 which presents a summary of the biological resource impact conclusions under NEPA, MMPA, MSA and ESA from the removal location at Bremerton, WA, towing in the open ocean, and the Proposed Action representative dismantling location in Brownsville, TX.

4.3.3 Brownsville, TX

Benthic communities

Potential direct impacts to benthic communities may result from effects of propeller wash of towing vessels and the release of and potential exposure to contaminants. Turbidity and siltation associated with propeller wash would be minor, local and transient and minimized by the very slow speeds of the towed vessels near shore. Moreover, approvals, inspections, licenses and other procedures required for towing would minimize the risk of the towboat or another vessel from being involved in a collision during towing to the facility. Further, the Navy's dismantling contracts require that the dismantling facility obtain all applicable environmental and occupational safety and health permits prior to commencing the dismantling project. Thus, the Navy has determined that implementing the Proposed Action at a facility located near Brownsville, TX, would have no significant impact to benthic communities under NEPA.

Fish and Essential Fish Habitat

Towing can cause sediments and contaminants to be suspended in nearby waters which potentially could impact fish. Minor to no impact is anticipated for mobile fish species that can readily avoid the temporary disturbance and potentially increased turbidity in the water column that may occur because of towing activities.

Potential impacts to EFH would be as described above for benthic communities; however, the closest EFH-designated water body to the dismantling facility is the Gulf of Mexico, seventeen miles away at the other end of the BSC. When enroute to Brownsville, the vessel is not expected to come in contact with EFH during the tow.

Therefore, the Navy has determined that implementing the Proposed Action at a facility located near Brownsville, TX, would have no effect on EFH as defined by the MSA and no significant impact on EFH under NEPA.

Threatened and Endangered Species and Marine Mammals

Towing ex-RANGER into the Port of Brownsville does include the risk of vessel strikes to marine mammals and sea turtles. However, based upon the slow speed of the tug and tow, along with the relatively short periods they would be transiting habitats where the most susteptible species (Sperm whales and sea turtles) are most likely to be encountered, the NMFS concurred with the Navy's conclusion that the Proposed Action is not likely to adversely affect ESA-listed marine mammals and sea turtles.

The introduction of invasive species via hull biofouling would primarily be a concern to ESA-listed species and critical habitats in the locations of the Port of Brownsville. Although some biofouling organisms are capable of attaching to cenaceans, the NMFS concluded that limited exposure of the ex-RANGER and the density of ESA-listed cetaceans suggest the likelihood of ESA-listed species encountering these vessels while in transit and being inoculated with biofoulers is so unlikely as to be discountable. Only the green, hawksbill, Kemp's ridley, leatherback, and loggerhead sea turtles occur within the Brownsville vicinity and there are no recorded instances of these species occurring in the heavily industrialized end of the Port of Brownsville. Potential direct effects to sea turtles of the introduction of invasive species that may foul the hull of the transported vessels may include parasitism by invasive species, which could lead to fitness consequences. Biofouling of turtle shells can also increase drag, resulting in increased energy expenditure of sea turtles during movement. However, turtle shells are often fouled by organisms and the occasional shedding of scutes lessens the impact of this fouling. The NMFS concluded that the probability of direct effects from parasitism are very low, and therefore the likelihood of take of sea turtles from parasitism is so low as to be discountable.

The introduction of invasive species that may foul the hull of transported vessels has the potential to lead to indirect effects to sea turtles in the form of changes to benthic habitat and/or changes to invertebrate prey. These effects could result from invasive species preying upon, outcompeting, or smothering organisms that may be critical to a sea turtle's benthic habitat or food chain. The alteration of a sea turtle's habitat or food chain could potentially lead to behavioral disturbance in the form of requiring a turtle to travel farther or could cause fitness consequences if a turtle is unable to feed. The hawksbill, loggerhead, and Kemp's ridley sea turtles are generalist feeders and it is unlikely additional biofouling species would impact the ability of these species to locate food even if they were to co-occur with biofouling invasion areas. Green sea turtles are specialist feeders and only eat seagrasses and algae as adults. As such, green sea turtles would be more susceptible to biofouling invaders capable of impacting the food web's seagrasses and algae and ultimately the green sea turtle. However, no sea turtles, including the green sea turtle, utilize the industrialized portion of the Port of Brownsville as habitat. The Port of Brownsville is relatively isolated, occurring more than 13 miles inland in a channel that mostly lacks suitable substrate for biofouling spread and invasion. There is limited evidence to suggest biofouling organisms are capable of spreading from the Port of Brownsville to the Gulf of Mexico where sea turtles are more likely to occur. Therefore, the NMFS concluded that in the instance of the towing of the ex-RANGER to the Port of Brownsville, effects to sea turtles from biological invasions occurring in this area are not reasonably expected to occur and are discountable.

Pursuant to its informal programmatic consultation with NMFS under section 7 of the ESA, the Navy has determined, and the NMFS has concurred with the Navy's determination, that the Proposed Action may affect but will not adversely affect certain species of whales (Blue whale, *Balaenoptera musculus*; Fin whale, *Balaenoptera physalus*; Humpback whale, *Megaptera novaeangliaie*; Sei whale, *Balaenoptera borealis*; Sperm whale, *Physteter macrocephalus*); and sea turtles(Green turtle, *Chelonia mydas*; Hawksbill turtle, *Eretmochelys imbricate*; Kemp's ridley turtle, *Lepidochelys kempii*; Leatherback turtle, *Demochelys coriacea*; Loggerhead turtle, *Caretta caretta*; and Olive ridley turtle, *Lepidochelys olivacea*) in the vicinity of a disposal facility located near Brownsville, TX.

There is a low possibility that the West Indian manatee, an endangered species known occasionally to inhabit the Texas Gulf Coast near Brownsville (see Table 3-3) could be impacted by towing the ship in the direction of the BSC. It would be especially unusual for manatees to occur in the BSC due to its high level of development and limited food resources (vegetation) for the manatees. Thus, with the low probability the manatees would occur near the Brownsville, TX, recycling facility, pursuant to the ESA, there would be no effect on West Indian manatee and under the MMPA no reasonably foreseeable takes.

In accordance with the informal programmatic consultation held between the Navy and NMFS under section 7 of the ESA, to reduce the potential for a vessel strike to protected species, and pursuant to the November 17, 2014, concurrence letter, the Navy would employ the following mitigation measures as part of the Proposed Action:

- Whenever marine mammals or sea turtles are sighted, the tug's crew will increase vigilance and take reasonable and prudent actions to avoid collisions and other activities that might result in close interactions between the vessels and animals. Actions may include changing speed and/or direction as dictated by environmental and other conditions (e.g., safety, weather). The Navy will ensure crew are adequately trained to spot and identify marine mammals and sea turtles.

- The tug and tow will avoid Dynamic Management Areas (DMA) for right whales to the maximum extent practicable. If towing is to occur within a DMA, the tug and tow will reduce speeds to 10 knots or less while transiting through these areas in accordance with 50 CFR 224.105, 9 December 2008. Tugboat operators would be required to follow the NOAA/NMFS *Vessel Strike Avoidance Measures and Reporting for Mariners* to reduce the potential of vessel strikes to marine species. Navigational lookouts would be alert for marine mammals entering the line of travel for the vessel.

- Any interaction between contracted tug vessels and listed species will be logged by contracted tug operators. Data from these logs will be reported annually to the NMFS Office of Protected Resources.

Furthermore, under the MMPA, the Navy has determined that the Proposed Action would not result in reasonably foreseeable takes of marine mammals in this location. Pursuant to NEPA, the

Proposed Action, would have no significant impact to marine mammals or threatened and endangered species in the vicinity of Brownsville, TX.

4.3.4 No-Action Alternative

Under the No-Action Alternative, ex-RANGER would not be removed from INACTSHIPMAINTO Bremerton. The vessel would continue to be maintained in a safe stowage condition (i.e., fire and flooding protection). Under the MMPA, the Navy has determined that the No-Action Alternative would have no effect on marine mammals. Under the ESA, the Navy has determined that the No-Action Alternative would have no effect on threatened and endangered species. Pursuant to NEPA, the No-Action Alternative would have significant impacts to biological resources.

4.4 Air Resources/Climate Change

Estimated emissions from a proposed Federal action are typically compared with the relevant national and state standards to assess the potential for increases in pollutant concentrations. Impacts would occur if the action alternatives directly or indirectly produce emissions that would be the primary cause of, or would significantly contribute to, a violation of state or Federal ambient air quality standards. Emission thresholds associated with CAA conformity requirements are another means of assessing the significance of air quality impacts. A formal conformity determination is required for Federal actions occurring in nonattainment or maintenance areas when the total direct and indirect stationary and mobile source emissions of nonattainment pollutants or their precursors exceed thresholds or *de minimis* values. However, both the Bremerton, WA, and Brownsville, TX, areas are in attainment for NAAQS. Thus, the Conformity Rule does not apply to either location.

Emissions from diesel powered tugboats include nitrogen, carbon monoxide/dioxide, oxygen, methane, sulfur dioxide, and water vapor. Some of the expected emissions (carbon monoxide/dioxide, methane) are also GHGs.

4.4.1 INACTSHIPMAINTO Bremerton/Puget Sound

Ongoing operations at INACTSHIPMAINTO Bremerton would not increase since the vessel would be removed from this location. There would be no increase in the air quality emissions at the site.

The entire Puget Sound air quality district is designated by the EPA as being in attainment for all criteria pollutants, meeting all NAAQS standards. Therefore, the Conformity Rule does not apply.

The towing operation at INACTSHIPMAINTO Bremerton would result in a minor but temporary increase of marine vessel emissions. Following ex-RANGER's removal from her

INACTSHIPMAINTO Bremerton berthing location, air quality would return to preexisting ambient conditions.

Therefore, in accordance with NEPA, the Proposed Action would have no significant impact on air quality including GHG emissions in the Bremerton, WA, area.

4.4.2 Towing in the Open Ocean

The tugboats used during towing operation would cause minor but temporary increases of marine vessel air emissions. These increases would be expected to quickly dissipate. Therefore, in accordance with NEPA, the Proposed Action would have no significant impact on air quality in the open ocean.

4.4.3 Brownsville, TX

The entire Brownsville-Laredo Air Quality Control Region (AQCR) 213 is designated by the EPA as being in attainment for all criteria pollutants, meeting all NAAQS standards. Therefore, the Conformity Rule does not apply.

In general, ship recycling activities at a facility near Brownsville, TX could result in temporary minor, localized impacts to air quality. However, ship dismantling activities that comply with applicable rules and regulations would not significantly affect air quality. The Proposed Action does not require construction of any new land-based facilities, however, some new or maintenance dredging may be needed to expand the length and width of an existing dismantling slip depending on which contractor is selected. Should new or maintenance dredging be necessary, it would be conducted by the dismantling contractor in accordance with existing permits with the ACOE (ACOE, 2012).

The Navy's dismantling contracts have a clause that requires the contractor to comply with all applicable Federal, state and local environmental and safety and health laws and regulations. The dismantling/recycling would occur at an existing industrial facility that is capable of the operation with current operational credentials and permitting that would allow them to conduct the dismantling in their normal course of business. Therefore, it is not anticipated that the contractor would need to obtain any additional air quality related permits in order to perform the requirements of the contract. Relevant air emissions, including greenhouse gas emissions, would be localized and of short duration.

No long-term increases in emissions would occur as no new stationary sources are required for the Proposed Action. Therefore, the Navy has concluded that under NEPA, the Proposed Action would have no significant impact on air quality including GHG emissions at the proposed dismantling location.

4.4.4 No-Action Alternative

Under the No-Action Alternative, ex-RANGER would not be removed from INACTSHIPMAINTO Bremerton. The vessel would continue to be maintained in a safe stowage condition (i.e., fire and flooding protection) which would not affect air quality conditions. There would be no significant impacts to air quality including GHGs under NEPA.

4.4.5 Climate Change

Climate change is not expected to be affected by the Proposed Action because (1) GHG emissions from the proposed action are expected to be *de minimis* for the removal of the vessel from her berth at INACTSHIPMAINTO Bremerton; towing in the open ocean is expected to produce minor but temporary increases in emissions that will quickly dissipate into the open ocean; and (2) the selected facility would be conducting the dismantling as part of normal operations and would be expected to be operating under existing Federal, state, and local permits for air quality. No significant increases to air emissions are expected overall; therefore, there would be no induced effects to climate change by GHGs during towing. No changes in air emissions including GHGs and therefore no effect on climate change would occur under the No-Action Alternative.

5.0 CUMULATIVE IMPACTS

Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time (40 C.F.R. § 1508.7). To be considered cumulative impacts, the effects must meet the following criteria: the effects would occur in a common locale or region; the effects would not be localized (i.e., they would contribute to effects of other actions); the effects would impact a particular resource in a similar manner; and the effects would be long term (short-term impacts would be temporary and would not typically contribute to significant cumulative impacts).

Federal regulations implementing the NEPA (42 U.S.C. § 4321 et seq.) and Navy Procedures for Implementing the NEPA (32 C.F.R. Part 775), as described in the CNO Environmental Readiness Program Manual (OPNAV M-5090.1) require that the cumulative impacts of a Proposed Action be assessed. The CEQ regulations implementing the procedural provisions of the NEPA define cumulative impacts as:

"The impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (federal or non-federal) or person undertakes such other actions." (40 C.F.R. § 1508.7)

To analyze cumulative impacts, a cumulative impacts region must be identified for which the Proposed Action and other past, proposed, and reasonably foreseeable actions would be cumulatively recorded or experienced. Consequently, the region where cumulative impacts may occur includes INACTSHIPMAINTO Bremerton, and the surrounding area. Therefore, this analysis considers impacts arising from the Proposed Action combined with the impacts of other known past, present, and reasonably foreseeable future actions within the regions.

The decision to dismantle ex-RANGER would require that the vessel be towed and dismantled at a commercial facility closed to public access with no requirement for new construction. Under NEPA, the Proposed Action would have no impacts on land use, geology, soils and seismicity, socioeconomics and environmental justice, transportation, noise, utilities, public health and safety, aesthetics and visual resources. Therefore, the decision to dismantle would have no cumulative impacts on these resources when considered with other projects.

5.1 Projects near INACTSHIPMAINTO Bremerton

The following sections provide general information regarding other projects located at INACTSHIPMAINTO Bremerton and in the nearby area including Military Construction (MILCON) projects, and other special projects funded by the Navy.

During the past 15 years, the Navy has replaced one pier, deepened berths, turning basins and channels and conducted other miscellaneous in-water structural repairs and upgrades in this industrial complex. Work (the Pier D project) conducted in 2000-2002 included piling removal

and dredging for three piers' berthing and a turning basin for NIMITZ-Class Aircraft Carrier homeporting.

Piers 5 and 6 fender pile replacement work was completed in 2010; this was covered by a CATEX.

Mooring G fender and structural pile repairs was covered under a CATEX. The work was completed in 2011.

The Port of Bremerton's Bremerton Marina Expansion Project was executed in 2008 and included a breakwater and float for 300 new boat slips.

Pier B replacement was completed in 2012. The EA and Finding of No Significant Impact (FONSI) for this project were completed in 2008.

The Navy is not aware of any other proposed Federal or non-Federal projects in the vicinity of INACTSHIPMAINTO Bremerton that could contribute to cumulative effects.

5.2 Projects near Brownsville, TX, facilities

There have been hundreds of vessels, including Navy, MARAD and commercial, dismantled along the BSC. There are current dismantling and recycling activities occurring under Navy and MARAD contracts, and the proposed dismantling of ex-RANGER would be part of ongoing operations at the contracted dismantling facility. There is periodic maintenance dredging of the BSC. There is no known construction project planned at the potential dismantling facilities, nor in the nearby area which would result in a significant cumulative impact in the project area.

5.3 Cultural Resources

The cumulative consequences of other projects together with the Proposed Action would not significantly affect cultural resources. Ex-RANGER is eligible for listing in the NRHP. The Navy is fulfilling its Section 106 obligations by complying with the Program Comment. In addition, there are no planned projects that would impact the PSNS National Historic Landmark. Ex-RANGER is not a contributing element of the National Historic Landmark. As a result, the Proposed Action would not combine with impacts from other past and future projects in a manner that would create a cumulative cultural resource impact.

5.4 No-Action Alternative

Under the No-Action Alternative, ex-RANGER would not be removed from INACTSHIPMAINTO Bremerton. The vessel would continue to be maintained in a safe stowage condition (i.e., fire and flooding protection) which would not result in a cumulative impact.

5.5 Cumulative Impacts by Environmental Resource

Ex-RANGER would be towed and dismantled at a commercial facility with no construction required and the vessel would be closed to public access, the project would have no impact on land use, geology, soils and seismicity, socioeconomics and environmental justice, transportation, noise, utilities, public health and safety, aesthetics and visual resources. Therefore, it would have no cumulative impacts on these resources when considered with other projects. The sections below evaluate potential cumulative impacts for the resources analyzed in this EA: Cultural, water, biological, and air resources.

5.5.1 Cultural Resources

The cumulative consequences of other projects together with the Proposed Action would not affect cultural resources. Ex-RANGER was found eligible for listing in the NRHP. See section 3.1.2 for a description of ex-RANGER's eligibility status under the NRHP and the mitigation actions the Navy will undertake to preserve the history of this vessel.

Ex-RANGER is not a contributing element to the historic districts in Bremerton near INACTSHIPMAINTO, and there would be no impacts on cultural resources at any of the representative dismantling facilities. The Proposed Action would not change any Tribe's ability to exercise Tribal treaty rights; thus, there would be no significant impacts to Tribal culture. As a result, the Proposed Action would not combine with impacts from other past and future projects in a manner that would create a cumulative cultural resource impact.

5.5.2 Water Resources Including Coastal Resources

The Proposed Action may cause temporary impacts to water quality in shipping channels and the open ocean as a result of increased turbidity; however, towing procedures would include measures to avoid sediment disturbance. To accommodate ex-RANGER, some new or maintenance dredging may be needed to expand the length and width of an existing dismantling slip depending on which contractor is selected. The small increase in impacts to water quality associated with any dredging that would be specifically associated with ex-RANGER would not significantly increase the dredging that is conducted routinely within the BSC. Therefore, the Proposed Action would not have any cumulative impact to water resources when considered with these other dredging projects.

Other projects in the vicinity of INACTSHIPMAINTO Bremerton, WA, or Brownsville, TX could produce minor discharges that would flow into surface drainages and eventually to the marine environment. However, these projects would also be required to comply with applicable Federal, state, and local regulations, as well as general and construction storm water permits. These mandated requirements would reduce potential impacts on water quality to less than significant levels. Therefore, the cumulative impact on water resources would result from several actions whose individual effects would have been reduced to levels that are not significant. The Proposed Action and reasonably foreseeable projects would not likely be

occurring at the same time in the same area. Therefore, the Proposed Action would not have any cumulative impact when considered with these projects.

5.5.3 Biological Resources

The Proposed Action would not adversely affect marine biological resources. Due to the limited scope and local area of the impacts associated with the other identified projects there would be no significant cumulative impacts on biological resources. The Proposed Action and other projects would have the potential to temporarily affect marine species and their habitat including sea turtles and marine mammals, but there would be no significant impact on these species because they are mobile and able to avoid the disturbance area. Threatened or endangered species habitat would not be significantly impacted by the Proposed Action. Moreover, these projects would not likely be occurring at the same time in the same area. No significant in-water construction work is planned in the vicinity of ex-RANGER's berth or at dismantling facilities. No cumulative effects to endangered species due to towing are anticipated because the Proposed Action, pursuant to the Navy's consultation with NMFS, would utilize mitigation practices to avoid a take or otherwise cause harm to marine mammals. While EFH for salmon species does exist in Sinclair Inlet, the industrial nature of INACTSHIPMAINTO Bremerton would reduce the quality of the habitat in this area of Sinclair Inlet and no significant impacts to EFH are anticipated. In Brownsville, the dismantling facilities are near, but not within, EFH designated areas; therefore, there would be no impact to EFH at this location. No cumulative impacts to biological resources are anticipated.

5.5.4 Air Quality

Impacts resulting from project emission sources, in combination with impacts from any past and reasonably foreseeable future projects, would not have any cumulative impacts on air quality nor would global climate change be affected. Temporary and minimum impact to air quality would occur during towing activities. However, the Proposed Action and reasonably foreseeable projects would not likely be occurring at the same time in the same area, so potential impacts would be moderated over time and space. Additionally, ambient air quality is expected to return to the original condition upon the completion of each project. As a result, the Proposed Action would not have cumulative impacts to air quality when considered with other activities in the project area.

6.0 OTHER CONSIDERATIONS REQUIRED BY NEPA

6.1 Possible Conflicts between the Proposed Action and the Objectives of Federal, State, Local, and Regional Land Use Plans, Policies, and Controls

Implementation of the Proposed Action would comply with existing Federal regulations state, regional, and local policies and programs. The Federal acts, Executive Orders, policies, and plans that apply include the following: NEPA; CAA and Federal General Conformity Rule; CWA; CZMA; ESA; MBTA and E.O. 13186; MMPA; NHPA; and E.O. 12372. Applicable state, local, and regional plans, policies, and controls include: state Coastal Zone Management Programs; state ESAs; and the relevant Air Quality Control Region (AQCR) rules and regulations.

6.2 Federal Acts, Executive Orders, Policies, and Plans

In addition to the Federal Acts, Executive Orders, Policies and Plan already discussed previously, the following Executive Order is pertinent to the Proposed Action.

Executive Order 12372

EO 12372, Intergovernmental Review of Federal Programs, was issued in 1982 in order to foster an intergovernmental partnership and a strengthened federalism by relying on state and local processes for the state and local government coordination and review of proposed Federal financial assistance and direct Federal development.

The Navy pursues close and harmonious planning relations with local and regional agencies and planning commissions of adjacent cities, counties, and states for cooperation and resolution of mutual land use and environment related problems. In preparing this EA, relevant data from state, regional, and local agencies were reviewed in order to determine regional and local conditions associated with the Proposed Action. With respect to the Proposed Action, no mutual land use or environmental issues require resolution.

6.2.1 State, Local, and Regional Plans, Policies, and Controls

Texas Coastal Management Program
The Navy has determined that the State of Texas does not require any coastal consistency for towing ex-RANGER.

Washington Coastal Zone Management Program
The Navy has determined that Washington State does not require any coastal consistency for vessel movements. Thus, the project is consistent with the State CMP.

State Endangered Species Acts
The Navy has concluded that there would be no effect from the Proposed Action on species covered under the state ESAs except insofar as the same species are also federally protected.

Air Quality Management District Rules and Regulations
The Proposed Action air emissions would comply with all applicable AQCR rules and regulations.

6.3 Energy Requirements and Conservation Potential of Alternatives Including the Proposed Action and All Mitigation Measures Being Considered

The Proposed Action would not result in any additional energy requirements above the current routine operations of the dismantling facilities. Therefore, no mitigation and/or monitoring measures will be implemented.

6.4 Irreversible or Irretrievable Commitment of Natural or Depletable Resources

The NEPA requires an analysis of significant, irreversible effects resulting from implementation of a Proposed Action. Resources that are irreversibly or irretrievably committed to a project are those that are typically used on a long-term or permanent basis; however, those used on a short-term basis that cannot be recovered (e.g., non-renewable resources such as metal, wood, fuel, paper, and other natural or cultural resources) are also irretrievable. Human labor is also considered an irretrievable resource. All such resources are irretrievable in that they are used for one project and thus become unavailable for other purposes. An impact that falls under the category of the irreversible of irretrievable commitment of resources is the destruction of natural resources that could limit the range of potential uses of that resource.

Implementation of the Proposed Action would result in an irreversible commitment of fuel, human labor, and other resources for towing and dismantling of the vessel. These commitments of resources are neither unusual nor unexpected, given the nature of the action.
The Proposed Action would not result in the destruction of environmental resources such that the range of potential uses of the environment would be limited nor affect the biodiversity of the region.

6.5 Relationship between Local Short-Term Use of the Human Environment and Maintenance and Enhancement of Long-Term Natural Resource Productivity

The NEPA requires consideration of the relationship between short-term use of the environment and the impacts that such use could have on the maintenance and enhancement of long-term productivity of the affected environment. Impacts that narrow the range of beneficial uses of the environment are of particular concern. Such impacts include the possibility that choosing one

option could reduce future flexibility to pursue other options, or that choosing a certain use could eliminate the possibility of other uses at the site.

Implementation of the Proposed Action would not result in any such environmental impacts because it would not pose long-term risks to health, safety, or the general welfare of the communities surrounding the project area that would significantly narrow the range of future beneficial uses.

6.6 Means to Mitigate and/or Monitor Adverse Environmental Impacts

The Proposed Action would result in only one potentially significant environmental impact: the dismantling of a vessel which is eligible for listing in the NRHP. To mitigate the dismantling of ex-RANGER, the Navy will follow the Program Comment's requirements including preservation of important vessel records.

In accordance with the informal programmatic consultation held between the Navy and NMFS under section 7 of the ESA, to reduce the potential for a vessel strike to protected species, and pursuant to November 17, 2014, concurrence letter, the Navy would employ the following mitigation measures as part of the Proposed Action:

- Whenever marine mammals or sea turtles are sighted, the tug's crew will increase vigilance and take reasonable and prudent actions to avoid collisions and other activities that might result in close interactions between the vessels and animals. Actions may include changing speed and/or direction as dictated by environmental and other conditions (e.g., safety, weather). The Navy will be responsible for ensuring tug crew are adequately trained to spot and identify marine mammals and sea turtles.

- The tug and tow would avoid Dynamic Management Areas (DMA) for right whales to the maximum extent practicable. If towing is to occur within a DMA, the tug and tow will reduce speeds to 10 knots or less while transiting through these areas, in accordance with 50 CFR 224.105, 9 December 2008. Tugboat operators would be required to follow the NOAA/NMFS *Vessel Strike Avoidance Measures and Reporting for Mariners* to reduce the potential of vessel strikes to marine species. Navigational lookouts would be alert for marine mammals entering the line of travel for the vessel.

- Any interactions between contracted tug vessels and listed species will be logged by contracted tug operators. Data from these logs will be reported annually to the NMFS Office of Protected Resources

The tug and tow would travel at less than 10 knots, typically in the range of 6 to 8 knots. Towing would be conducted in accordance with the requirements of Appendix H of the U.S. Navy Towing Manual, SI746-AA-MAM-010, Rev. 3, July 2002. The Navy contractor would be responsible for making all applicable notifications with the towing activity and would adhere to

all applicable safety and marine mammal/endangered species protection requirements for towing the inactive ship. Commercial pilots would be utilized for departures from and entries into ports.

The letter of concurrence from NMFS also noted that the incidental take of listed species associated with the tug and tow of ex-RANGER, including behavioral harassment, injury, or mortality, is not anticipated nor exempted; thus, if take occurs as a result of the action, NAVSEA must immediately contact the NMFS Office of Protected Resources Interagency Cooperation Division to develop and implement mitigation to avoid additional take or initiate formal consultation in accordance with ESA section 7(a)(2). This formal consultation would be in addition to the formal consultation which the Navy expects to enter into to evaluate, at a programmatic level, the potential for towing of inactive Navy ships to affect ESA habitat due to the possible presence of invasive species on the hulls of towed vessels.

6.7 Any Probable Adverse Environmental Effects that cannot be Avoided and are not Amenable to Mitigation

This EA has determined that the Proposed Action would not result in any significant immitigable impacts to the human environment; therefore, there are no probable adverse environmental effects that cannot be avoided or are not amenable to mitigate.

7.0 CONCLUSION

The Proposed Action would not adversely modify or destroy critical habitat, and the towing portion of the Proposed Action is not likely to adversely affect ESA-listed species. For animals protected under the MMPA, no foreseeable takes are expected. No significant impacts to any other resource area are expected to occur as a result of the Proposed Action with implementation of mitigation actions.

Ex-RANGER is eligible for listing in the NRHP and dismantling would have an adverse effect on a cultural resource, the ship itself. In accordance with the Program Comment for vessels eligible for listing in the NRHP, the Navy will meet its responsibilities for compliance with Section 106 of the NHPA concerning the evaluation of vessels for eligibility for listing in the NRHP and the final disposition of eligible vessels.

The Proposed Action would comply with all Federal and state regulations, guidelines, and consultation agreements. Based on the findings from this EA/OEA, preparation of a FONSI/Finding of No Significant Harm (FONSH) is recommended.

8.0 PREPARERS

This EA has been prepared by the United States (U.S.) Department of the Navy (DON), under the direction of the Naval Sea Systems Command, NAVSEA 21, SEA 21I, Inactive Ships Office. The professional staff who contributed to the preparation of this document are listed below:

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9.0 PERSONS AND AGENCIES CONTACTED

The following were contacted regarding towing/dismantling of ex-RANGER (CV 61), or were contacted during resolution of prior, directly related aircraft carrier towing/dismantling issues:

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