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## 3.12 Socioeconomics



## 3.12 SOCIOECONOMICS

### 3.12.1 Affected Environment

For purposes of this Environmental Impact Statement/Overseas Environmental Impact Statement (EIS/OEIS), the Region of Influence (ROI) for socioeconomics includes the Gulf of Alaska (GOA) Temporary Maritime Activities Area (TMAA). With the exception of Cape Cleare on Montague Island located over 12 nautical miles (nm) (22 kilometers [km]) from the northern point of the TMAA, the nearest shoreline (Kenai Peninsula) is located approximately 24 nm (44 km) north of the TMAA's northern boundary. The approximate middle of the TMAA is located 140 nm (259 km) offshore. Areas inland from the coastline, including United States (U.S.) Air Force (Air Force) air ranges and U.S. Army (Army) training lands, are addressed in the *Alaska Military Operations Areas EIS* (USAF 1995), *Improvements to Military Training Routes in Alaska Environmental Assessment* (USAF 2007), *Alaska Army Lands Withdrawal Renewal Final Legislative EIS* (Army 1999), and the *Transformation of U.S. Army Alaska FEIS* (Army 2004).

#### 3.12.1.1 Existing Conditions

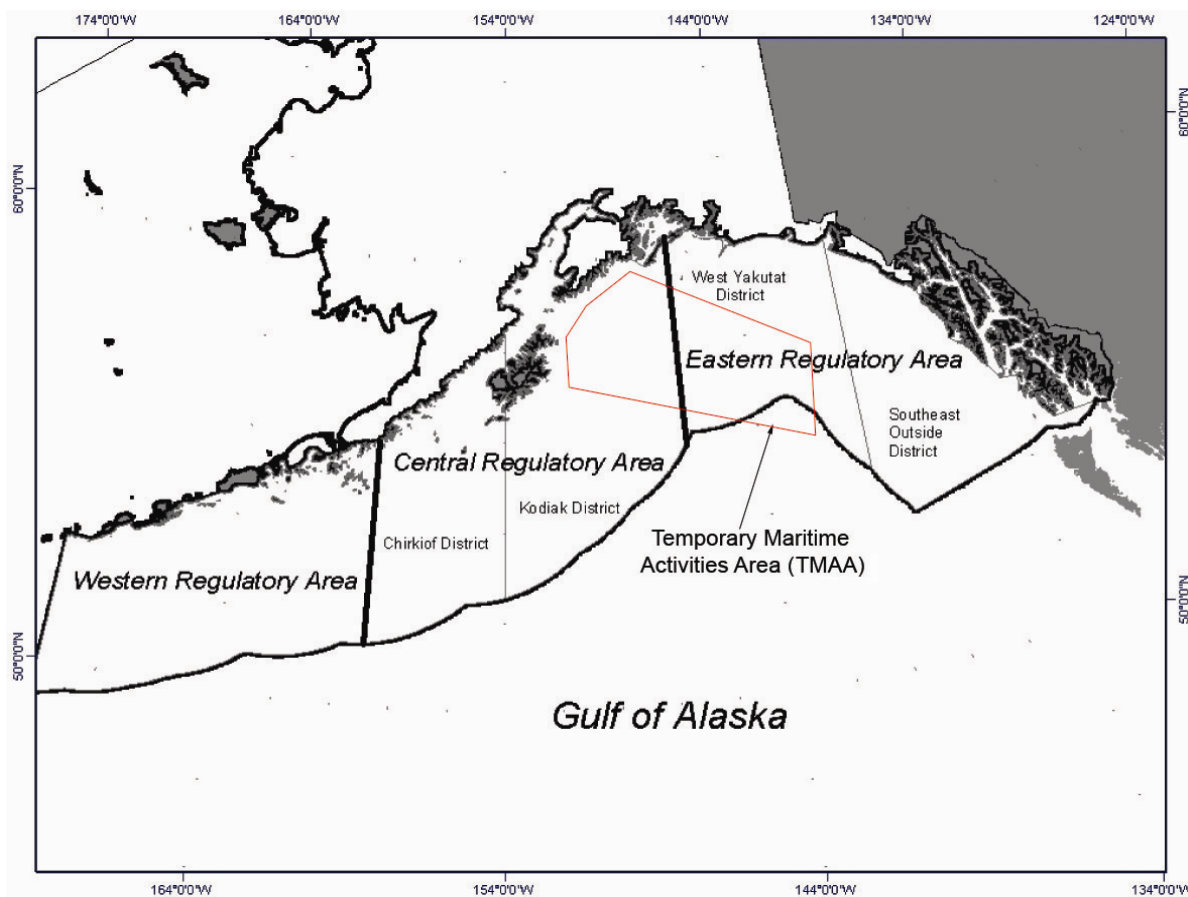
##### Commercial Shipping

The GOA is traveled by large and small marine vessels, with several commercial ports occurring near the TMAA. Two major ports near the TMAA, Anchorage and Valdez, were ranked in the top 150 U.S. ports by tonnage in 2000 (U.S. Department of Transportation Research and Innovative Technology Administration/Bureau of Transportation Statistics 2001). Commercially used waterways traverse the TMAA, but are controlled by the use of directional shipping lanes for large vessels (cargo, container ships, and tankers). Ships traveling from major ports to the Lower 48 and Hawaii as well as marine traffic between coastal ports enter the TMAA briefly, but Navy activities are communicated to all vessels and operators by use of Notice to Mariners (NOTMARs) found at <http://www.navcen.uscg.gov/lnm/d17/default.htm>. In addition to large commercial vessels traversing the GOA, the Alaska Marine Highway System (AMHS) provides ferry service for passengers and vehicles between coastal communities (AMHS 2007).

##### Commercial Fishing

Commercial fishing takes place throughout the GOA waters and in coastal inlets and bays. The North Pacific Fishery Management Council (NPFMC) is one of eight regional fishery management councils established by the Magnuson-Stevens Fishery Conservation and Management Act of 1976 (MSFCMA) for the purpose of managing fisheries 3 to 200 miles (mi) (1.8 to 370 kilometers [km]) offshore of the U.S. coastline (Carroll 2008). The primary responsibility of the NPFMC is the groundfish fisheries in the federal waters of the Bering Sea and the GOA. The groundfish include cod, flatfish, mackerel, Pollock, sablefish, and rockfish species outside of three miles offshore. Other large Alaska fisheries such as salmon, crab and herring are managed by the State of Alaska Department of Fish & Game (ADF&G).

The commercial fish resources of Alaska are of great importance to the economies of the state and the nation (Carlile et al. 2005). Most groundfish fisheries in the U.S. Exclusive Economic Zone (EEZ) are managed by the National Marine Fisheries Service (NMFS) (ADF&G 2008a). The NMFS Alaska Regional Office maintains commercial catch data for groundfish in federal waters. The TMAA spans the Central and Eastern regulatory areas, west of Prince William Sound and east of Chirikof (Figure 3.12-1) (NMFS 2008). In 2007, the Central regulatory area yielded 71,210 metric tons of groundfish which equaled approximately 54 percent of the total groundfish catch for the entire GOA. Groundfish fisheries in state waters are not discussed, as the TMAA exists outside of state waters.



**Figure 3.12-1: NMFS Regulatory Areas**

Alaska's commercial fisheries produce large volumes of shellfish, including several types of crab and shrimp (ADF&G 2008b). All commercial shellfish fisheries in state and federal waters are managed by the ADF&G. Ocean areas with fisheries near the TMAA are located around Kodiak Island. Dungeness and Tanner crabs are the two types of crabs harvested near Kodiak. In 2007, fisheries near Kodiak Island yielded approximately 522 metric tons of Tanner and Dungeness crabs, approximately 2 percent of the total crustacean catch (ADF&G 2007).

Weathervane scallops are the only scallop commercially harvested in Alaska at this time (ADF&G 2008c). Commercial fishing for weathervane scallops occurs in the GOA, Bering Sea, and Aleutian Islands where scallops occur in distinct beds composed of sand, silt, and clay. A major bed in the GOA is located off the coast of Kodiak Island. Individual catch data for the Kodiak beds is not maintained; however, the ADF&G states that between 1998 and 2002, one of the largest harvests came from the Kodiak area averaging 82 metric tons each year (Carlile et al. 2005). As a comparison, 222 metric tons were collected statewide for the 2006-2007 season (ADF&G 2007).

### **Recreation and Tourism**

Recreation and tourism is another resource of economic importance in the GOA. Recreation and tourist areas around the TMAA include the Kenai Peninsula, Kodiak Island, Prince William Sound, and Resurrection Bay (Alaska Department of Natural Resources 2008). There are 9 state parks on the Kenai Peninsula as well as Kenai Fjords National Park, 6 on the island of Kodiak, 14 marine parks in Prince William Sound, and 5 in Resurrection Bay. The parks offer a variety of activities close to shore such as sea kayaking, saltwater and freshwater fishing, and recreational boating (Figure 3.12-2). Most recreational

boating occurs close to shore in protected coves because of dangerous Gulf waters (National Park Service 2007).

Many people choose to navigate the GOA on ferries giving them spectacular views of glaciers, fjords, lush forests, and concentrations of seabirds and marine wildlife. Cruise travel along the GOA is a popular recreational activity and is the fastest growing tourist trade (city-data.com 2008). With excellent fishing and stunning coastal scenery, many visitors to the GOA choose to tour the area by boat and can choose from single-day to multi-day cruises (Alaska Travel Industry Association 2008).

Whale watching in Southcentral Alaska and the GOA occurs between June and early September, with August being the prime viewing month. A number of charter boat companies run whale watching cruises throughout the area.

In 2007, a total of 69,948 boats were registered statewide with Kenai and Kodiak accounting for 9,737 and 1,789 boats, respectively (Division of Motor Vehicles 2007). The totals do not account for thousands more small boats and watercraft that do not require registration.

#### **3.12.1.2 Current Requirements and Practices**

Long-range advance notice of scheduled activities and times are made available to the public and the commercial fishing community via the Internet. The local 17<sup>th</sup> District U.S. Coast Guard (USCG) NOTMARs may be found at: <http://www.navcen.uscg.gov/lnm/d17/>. The Federal Aviation Administration (FAA) Notices to Airmen (NOTAMs) may be found on the FAA publication webpage: <https://pilotweb.nas.faa.gov/>. These sites provide commercial fishermen, recreational boaters, pilots, and other area users notice that the military will be operating in a specific area and will allow them to plan their own activities accordingly. Military actions may temporarily relocate civilian and recreational activities. Schedules will be updated when changes occur with sufficient prior notice. If activities are cancelled at any time, this information is posted and the area is identified as clear for public use (Department of the Navy [DoN] 2007). To minimize potential military/civilian interactions, the Navy would continue to publish scheduled potentially hazardous training activities using the NOTAM and NOTMAR systems as applicable.

#### **3.12.2 Environmental Consequences**

As noted in Section 3.12.1, the ROI for socioeconomics includes the TMAA. Navy training activities that occur within the Air Force inland Special Use Airspace and the Army inland ranges were evaluated under previous National Environmental Policy Act (NEPA) documentation (USAF 1995, USAF 2007, Army 1999, Army 2004). These documents are incorporated by reference. Environmental effects in the open ocean beyond the U.S. territorial seas (outside of 12 nm [22 km]) are analyzed in this EIS/OEIS pursuant to Executive Order (EO) 12114.

##### **3.12.2.1 Previous Analyses**

Impacts related to socioeconomics were previously evaluated in Sections 3.10 and 4.10 of the *Alaska Military Operations Areas EIS* (USAF 1995), Sections 3.2.6 and 4.0 of the *Improvements to Military Training Routes in Alaska Environmental Assessment* (USAF 2007), Sections 3.19 and 4.19 of the *Alaska Army Lands Withdrawal Renewal Final Legislative EIS* (Army 1999), and Sections 3.13 and 4.13 of the *Transformation of U.S. Army Alaska FEIS* (Army 2004).

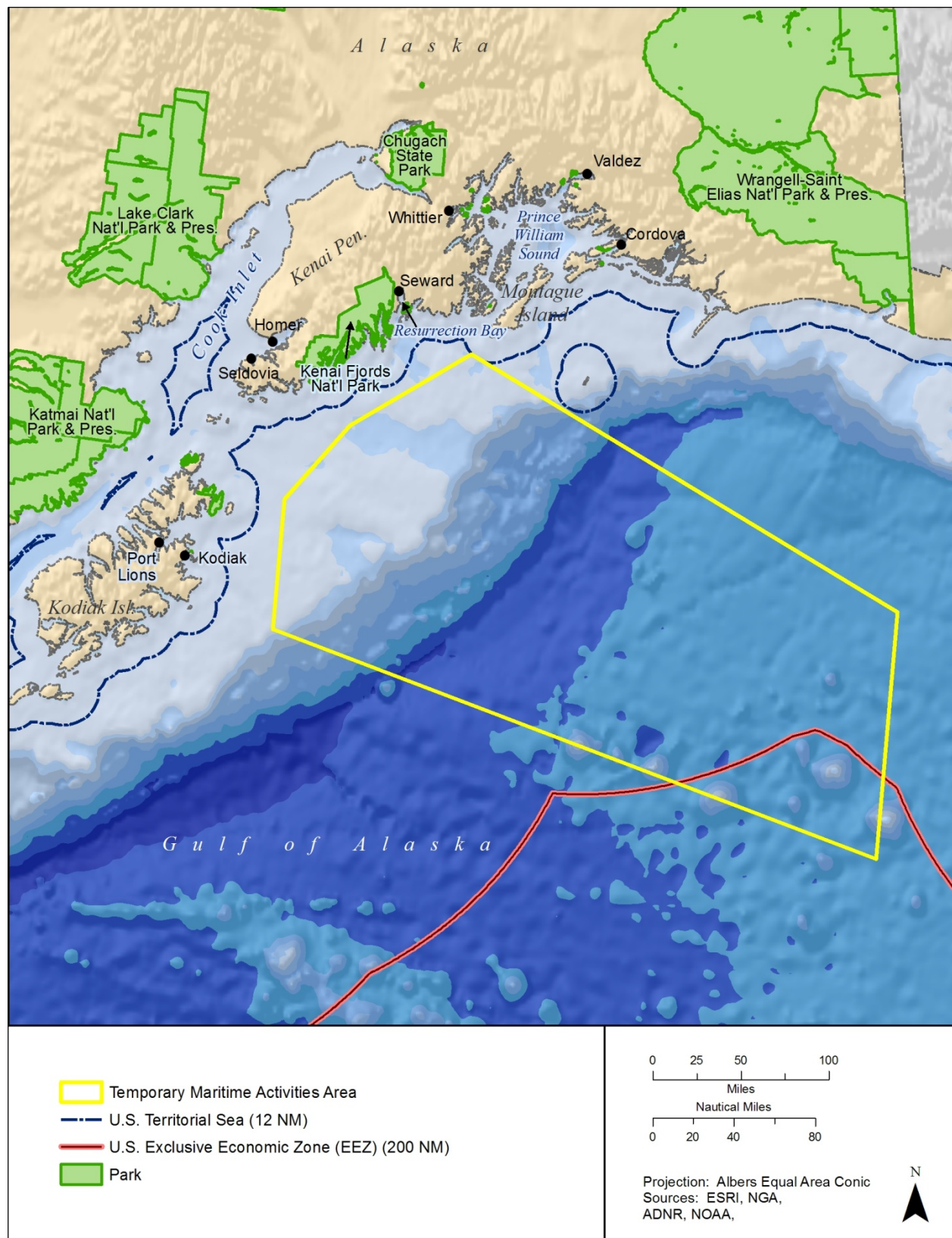


Figure 3.12-2: Parks and Recreation near the TMAA

### 3.12.2.2 Approach to Analysis

This analysis investigates the potential for activities associated with each of the alternatives to noticeably affect (either adversely or beneficially) socioeconomic activity in the GOA. Because there are no permanent population centers in the ROI, typical socioeconomic considerations such as population, housing, employment, economic growth, and associated services and infrastructure are not applicable. Additionally, training activities in the TMAA are not expected to significantly alter access to subsistence fishing areas or affect subsistence fishing resources because these fishing activities are generally located outside of the TMAA. The analysis for potential effects on socioeconomics focuses on those activities specific to commercial shipping, commercial fishing, recreation, and tourism in the GOA.

### 3.12.2.3 No Action Alternative

Civilian activities currently conducted in the TMAA include commercial shipping, commercial fishing, and tourist-related activities. These activities make an appreciable contribution to the overall economy of Alaska. The Navy has performed military activities within this region in the past and has not precluded fishing or recreational uses in the TMAA, even during peak fishing seasons. Under the No Action Alternative, training activities occur less than 6% of the year and are only conducted over a single period of up to 14 days. When training needs to be conducted during this period, a NOTMAR is issued. This measure provides mariners with Navy use areas in advance, which allows nonparticipants to select an alternate destination without appreciable effect to their activities. To help manage competing demands and maintain public access in the GOA, the Navy conducts its offshore activities in a manner that minimizes impacts to commercial fisherman (DoN 2007).

The activities proposed in the TMAA overlap in time and space with five International Pacific Halibut Commission statistical areas, the groundfish fishery areas, and the salmon fishing areas. However, the Navy does not exclude fishing activities from occurring in the TMAA during the training activities. The Navy has been training in the Gulf of Alaska for decades and is not aware of any negative interactions with the fishing community to date. Therefore, the Navy does not expect there to be any interruption in the frequency or location availability of fishing areas. An exception would be if there is a Navy training activity already taking place (such as a live fire exercise) that would require a temporary restriction to that area for safety reasons. This restriction could be expected to be several hours in duration (depending on activity). However, for safety purposes, Navy standard operating procedures will halt any activity when non-participants are present in the training area.

Fisheries research is a significant activity that is conducted in the GOA. Prior to commencing an exercise, the Navy will issue NOTAMs or NOTMARs informing the public of the training exercises. In addition, Navy standard operating procedures will halt any Navy training activities when non-participants are present in the training area. Therefore, no conflicts would occur with fisheries research and management activities, because the Navy will stop training activities or relocate to a different area.

Overflights associated with 300 sorties would occur above the TMAA. Most aircraft overflights would occur over the TMAA at elevations in excess of 15,000 ft (915 m). All aircraft overflights between the shore and 12 nm (22 km) from land would occur at altitudes at or above 15,000 ft (915 m). Though aircraft overflights produce noise and some of this sonic energy would reach the air-water interface, these activities are not expected to alter access to commercial or recreational fishing areas or affect commercial or recreational fishing resources. As described in Section 3.6.2.3, the behavioral responses that could occur from exposure to overflight noise would not compromise the general health or condition of individual fish and, as such, commercial or recreational fishing resources.

Many different types of commercial fishing gear are used in the GOA: gillnets, longline gear, troll gear, trawls, seining, and traps or pots. Damage to fishing gear from Navy activities in the TMAA is rare.

When damage does occur to commercial fishing gear due to Navy actions (i.e., net entanglement, destruction of buoys), the fishermen (or the owner of the property damaged) can file a claim with the DoN under the Federal Tort Claims Act (FTCA) under the provisions of 28 U.S. Code (U.S.C.) Section 2671, et seq. and request reimbursement. Forms for filing an FTCA claim can be obtained from any Navy Legal Services Office. Reimbursement requests must be made within 2 years of incurring damage.

#### **3.12.2.4 Alternative 1**

The increase in number of activities for the TMAA amounts to a 13 percent increase in the training activities over the No Action Alternative. Though the number of activities will increase under Alternative 1, training activities will continue to occur during a single period of up to 21 days, or 6% of the available training days in a year. To minimize potential military/civilian interactions, the Navy would continue to publish scheduled potentially hazardous training activities using the NOTAM and NOTMAR systems as applicable. This ensures that commercial and recreational users are aware of the Navy's plans, and allows users to plan their activities to avoid the scheduled activity (DoN 2007).

For years, fisheries in various parts of the world have complained about declines in their catch after acoustic activities (including naval exercises) moved into the area, suggesting that noise is seriously altering the behavior of some commercial species. Based on the analysis presented in Section 3.6 (Fish) of the EIS/OEIS, some marine fish may be able to detect mid-frequency sounds; most marine fish are hearing generalists and have their best hearing sensitivity below mid-frequency sonar. If they occur, behavioral responses would be brief, reversible, and not biologically significant. Sustained auditory damage is not expected. Sensitive life stages (juvenile fish, larvae, and eggs) very close to the sonar source may experience injury or mortality, but area-wide effects would likely be minor. The use of Navy mid-frequency sonar would not compromise the productivity of fish or adversely affect their habitat. Similar to the No Action Alternative, commercial fishing and fisheries research and management activities would not be impacted under Alternative 1.

Under Alternative 1, a Portable Undersea Tracking Range (PUTR) would be implemented. The PUTR involves the temporary placement of seven electronics packages (sensors) on the seafloor, each approximately 3 feet (ft) (0.9 m) long by 2 ft (0.6 m) in diameter and placed in a configuration on the seafloor with an area of 25-100 nm<sup>2</sup> (86-343 km<sup>2</sup>). Although no candidate locations have yet been identified, the electronic packages would be placed in water depths greater than 600 ft, at least 3 nm from land. Because this is a temporary installation—to be recovered once training is complete—no permanent restricted areas would be designated. While use of the PUTR by Fleet ships and aircraft would have no socioeconomic impact to the region, the gear placement on the seafloor could be incompatible with certain commercial fishing activities. Implementation of the PUTR would require the Navy to issue a NOTMAR to limit the possibility of any interactions with fishing activities that could damage or disturb the sensors. If, as a part of complying with the NOTMAR, fishing activities are voluntarily shifted to a different area, this could place an economic hardship on commercial fishing enterprises if the range is deployed in a viable fishing area. However, the Navy will, to its utmost ability, avoid commercially viable fishing areas when placing the PUTR.

The increased training tempo, addition of sonar use, and the temporary installation of a PUTR, which could be up to 42 days per year, would not result in a negative effect on socioeconomics in the region due to advanced public notification, practicable range siting, and the primarily short-term duration of military activities.

#### **3.12.2.5 Alternative 2**

Alternative 2 includes all elements of Alternative 1 plus a further increase in the number of training activities in the TMAA. Training activities under Alternative 2 would occur over two distinct periods,



each up to 21 days. In addition, Alternative 2 includes a Sinking Exercise (SINKEX) to be performed in each of the summer time exercises. As described in Section 2.6.1.1, SINKEX operations occur in the open ocean (at least 1,000 fathoms [6,000 ft] deep) where there are no sensitive marine resources or benthic fishing grounds. The stressors associated with SINKEX have been analyzed separately in previous sections, and while serious injury and/or mortality to individual fish would be expected if they were present in the immediate vicinity of several of these stressors (e.g., explosive ordnance), SINKEX under Alternative 2 would not result in impacts to fish populations and, thus, commercial fishing operations based on the low number of fish that would be affected.

To minimize potential military/civilian interactions, the Navy would continue to publish scheduled potentially hazardous training activities using the NOTAM and NOTMAR systems as applicable. This ensures that commercial and recreational users are aware of the Navy's plans, and allows users to plan their activities to avoid the scheduled activity (DoN 2007). The increased training tempo, as well as the addition of SINKEXs, would not result in a negative effect on socioeconomics in the region due to advanced public notification and the primarily short-term duration of military activities. Similar to the No Action Alternative, commercial fishing and fisheries research and management activities would not be impacted under Alternative 2.

### 3.12.3 Mitigation

No effects to socioeconomics were identified; therefore, no mitigation measures are necessary.

### 3.12.4 Summary of Effects

Table 3.12-1 summarizes the socioeconomic effects of the No Action Alternative, Alternative 1, and Alternative 2 under both NEPA and EO 12114.

**Table 3.12-1: Summary Effects by Alternative**

Alternative	NEPA (U.S. Territorial Seas, 0 to 12 nm)	EO 12114 (Non-U.S. Territorial Seas, > 12 nm)
<b>No Action Alternative</b>	<ul style="list-style-type: none"> <li>Current Navy activities were considered and are consistent with those analyzed in the previous environmental documentation (USAF 1995, USAF 2007, Army 1999, Army 2004). These documents concluded that no significant impacts related to socioeconomics would occur.</li> <li>Overflights would not result in adverse effects to commercial shipping, commercial fishing, recreation, or tourism.</li> </ul>	<ul style="list-style-type: none"> <li>No adverse impacts to commercial/recreational fishing, fisheries research/management, civilian access, or tourism would occur as a result of the No Action Alternative.</li> </ul>
<b>Alternative 1</b>	<ul style="list-style-type: none"> <li>Under Alternative 1, Navy activities were considered and would be consistent with those analyzed in the previous environmental documentation (USAF 1995, USAF 2007, Army 1999, Army 2004). These documents concluded that no significant impacts related to socioeconomics would occur.</li> <li>Overflights would not result in adverse effects to commercial shipping, commercial fishing, recreation, or tourism.</li> </ul>	<ul style="list-style-type: none"> <li>No adverse impacts to commercial/recreational fishing, fisheries research/management, civilian access, or tourism would occur as a result of Alternative 1.</li> <li>Use of the PUTR by Fleet ships and aircraft would have no socioeconomic impact to the region.</li> <li>Gear placement for the PUTR on the seafloor could be incompatible with certain commercial fishing activities.</li> </ul>

**Table 3.12-1: Summary Effects by Alternative**

Alternative	NEPA (U.S. Territorial Seas, 0 to 12 nm)	EO 12114 (Non-U.S. Territorial Seas, > 12 nm)
<b>Alternative 2 (Preferred Alternative)</b>	<ul style="list-style-type: none"> <li>Under Alternative 2, Navy activities were considered and would be consistent with those analyzed in the previous environmental documentation (USAF 1995, USAF 2007, Army 1999, Army 2004). These documents concluded that no significant impacts related to socioeconomics would occur.</li> <li>Overflights would not result in adverse effects to commercial shipping, commercial fishing, recreation, or tourism.</li> </ul>	<ul style="list-style-type: none"> <li>No adverse impacts to commercial/recreational fishing, fisheries research/management, civilian access, or tourism would occur as a result of Alternative 2.</li> <li>Use of the PUTR by Fleet ships and aircraft would have no socioeconomic impact to the region.</li> <li>Gear placement for the PUTR on the seafloor in a 25-100 nm<sup>2</sup> (86-343 km<sup>2</sup>) area could be incompatible with certain commercial fishing activities.</li> <li>SINKEX under Alternative 2 would not result in impacts to fish populations and thus commercial fishing operations.</li> </ul>