3.3 Water Resources

3.3 WATER RESOURCES

3.3.1 AFFECTED ENVIRONMENT

For purposes of this Supplemental Environmental Impact Statement (EIS)/Overseas EIS (Supplemental EIS/OEIS), the Region of Influence (ROI) for water resources remains the same as that identified in the March 2011 Gulf of Alaska Navy Training Activities Final EIS/OEIS and includes the Temporary Maritime Activities Area (TMAA) (the Study Area).

3.3.1.1 Existing Conditions

3.3.1.1.1 Ocean Water Resources, Climate, and Existing Water Quality

Ocean water resources, climate, and the existing water quality in the TMAA were discussed in the 2011 GOA Final EIS/OEIS. As stated in the 2011 GOA Final EIS/OEIS, there is little information on open ocean water quality; however, some studies suggest that deep water is, in general, of higher quality than surface waters. Additionally, water quality in marine environments is determined by complex interactions between physical, chemical, and biological processes. However, in regards to existing water quality:

- The TMAA includes a broad and deep continental shelf that contains troughs, seamounts, and ridges.
- The Gulf of Alaska region experiences high amounts of freshwater input from winter runoff. Timing and magnitude of winter runoff influences the temperature distribution of water around the continental shelf (Janout et al. 2010).
- Ocean circulation in the Gulf of Alaska is dominated by the counter-clockwise Alaska Gyre, which is made up of the Alaska Current, the Alaskan Stream, and the North Pacific Current.
- The Alaska Coastal Current is the primary element of continental shelf circulation in the Gulf of Alaska.

Following a review of recent literature, including the GAK1 station oceanographic data time series, the *Journal of Geophysical Research: Oceans*, the Alaska Ocean Observing System, and other peer-reviewed and scientific literature, no additional changes to water resources have been identified within the Study Area. Additionally, no new or additional United States (U.S.) Department of the Navy (Navy) training activities are being proposed in this Supplemental EIS/OEIS that would affect water resources in the Study Area. As such, the information and analysis on water resources presented in the 2011 GOA Final EIS/OEIS is still valid.

3.3.1.2 Current Requirements and Practices

The Alaska Clean Water Act provides that the State can only regulate munitions discharges in accord with the Federal Water Pollution Control Act; previously it had been amended to effectively remove a permit exception for discharges from munitions at military ranges. The amendment to the Alaska Clean Water Act passed in the 2013 legislature and was signed by Alaska Governor Parnell on 9 April 2013. The enacted bill enhances continued operation of Alaska Department of Defense (DoD) military ranges by requiring State water discharge permitting decisions to be consistent with the Federal Water Pollution Control Act.

As stated in the 2011 GOA Final EIS/OEIS and in Section 3.2 (Expended Materials) of this Supplemental EIS/OEIS, while at sea, Navy vessels are required to operate in a manner that minimizes or eliminates any adverse impacts on the marine environment. Environmental compliance policies and procedures applicable to shipboard operations afloat are defined in Chief of Naval Operations Manual (OPNAV M) 5090.1, Chapter 35, “Environmental Compliance Afloat” (U.S. Department of the Navy 2014); and

Department of Defense Instruction 5000.2-R (§C5.2.3.5.10.8, "Pollution Prevention"). In addition, Uniform National Discharge Standards (UNDS) (40 Code of Federal Regulations 1700) are applicable to Navy operations in the TMAA. The UNDS set national performance standards that require the use of marine pollution control devices to control discharges incidental to the normal operation of Armed Forces vessels. The Environmental Protection Agency and the DoD are given authority under Section 312 of the Clean Water Act to develop these standards and determine which discharges require control and which do not. Once determined, these controls ultimately will reduce the environmental impacts associated with these discharges.

Furthermore, provisions in Executive Order (EO) 12856, *Federal Compliance With Right-To-Know Laws and Pollution Prevention Requirements*, and EO 13101, *Greening the Government through Waste Prevention, Recycling, and Federal Acquisition*, reinforce the Clean Water Act prohibition against discharge of harmful quantities of hazardous substances into or upon U.S. waters out to 200 nautical miles, and mandate stringent hazardous waste discharge, storage, dumping, and pollution prevention requirements. Shipboard waste-handling procedures governing the discharge of nonhazardous waste streams have been established for commercial and Navy vessels. These categories of wastes include solids (garbage) and liquids such as "black water" (sewage), "gray water" (water from deck drains, showers, dishwashers, laundries, etc.), and oily wastes (oil-water mixtures). An updated Table 3.3-1, from OPNAV M-5090.1, (Chapter 35) summarizes the waste stream discharge restrictions for Navy vessels at sea and provides information on Navy Standard Operating Procedures (SOPs) and Best Management Practices (BMPs) for shipboard management, storage, and discharge of hazardous materials and wastes, and on other pollution protection measures intended to protect water quality. Chapter 5 (Standard Operating Procedures, Mitigation, and Monitoring) of this Supplemental EIS/OEIS discusses additional SOPs and BMPs used by the Navy to protect water resources.

Table 3.3-1: Waste Discharge Restrictions for Navy Vessels

Zone (nm from shore)	Type of Waste		
	Sewage ("Black Water")	Gray Water	Oily Waste
0–3 nm (U.S. Waters)	No discharge from Type III MSD; direct discharge from Type II MSD while underway, outside NDZs. In port, discharge to pierside collection facilities.	If no pierside collection capability exists, direct discharge permitted.	No sheen. If equipped with OCM, discharge = < 15 ppm oil.[1]
3–12 nm (U.S. Contiguous Zone)	Direct discharge permitted	Direct discharge permitted	No sheen. If equipped with OCM, discharge = < 15 ppm oil.[1]
12–25 nm	Direct discharge permitted	Direct discharge permitted	If equipped with OCM, discharge = < 15 ppm oil. Ships with OWSs or BWPTs but inoperable OCM must process all machinery space bilge water through OWS or BWPT.[2,3]
> 25 nm	Direct discharge permitted	Direct discharge permitted	Same as 12–25 nm[2,3]
> 50 nm and High Seas	Direct discharge permitted	Direct discharge permitted	Same as 12–25 nm[2,3]

Table 3.3-1: Waste Discharge Restrictions for Navy Vessels (continued)

Zone (nm from shore)	Type of Waste		
	Garbage (Non-plastic)	Garbage (Plastic)	
0–3 nm (U.S. Waters)	No discharge	No discharge	
3–12 nm (U.S. Contiguous Zone)	Pulped or comminuted food and pulped paper and cardboard waste may be discharged > 3 nm	No discharge	
12–25 nm	Bagged shredded glass and metal waste may be discharged > 12 nm[4]	No discharge	
> 25 nm	Direct discharge permitted[5]	No discharge	
> 50 nm and High Seas	Direct discharge permitted[5]	No discharge	

[1] If operating properly, OWS or BWPT discharge will routinely be less than 15 ppm.
[2] Surface ships without an operable OWS must retain oily waste for shore disposal. If operating conditions require at sea disposal, minimal discharge is permitted beyond 50 nm from nearest land.
[3] Indicates a change from what was stated in the Final EIS/OEIS.
[4] Submarines may discharge compacted, non-plastic, sinkable garbage between 12 and 25 nm, provided the depth of water is greater than 1,000 fathoms.
[5] Surface ships equipped with pulpers and shredders shall use them for all discharges of food products, paper, cardboard, glass, and metal wastes. Shredded metal and glass must be bagged prior to disposal. Submarines shall discharge compacted, non-plastic, sinkable garbage.
Notes: BWPT = Bilge Water Processing Tank, MSD = Marine Sanitation Device, NDZ = No Discharge Zone, nm = nautical mile(s), OCM = Oil Content Monitor, ppm = parts per million, OWS = oil/water separator, U.S. = United States
Source: Chief of Naval Operations Manual 5090.1

3.3.2 ALTERNATIVES ANALYSIS

All three alternatives (No Action Alternative, Alternative 1, and Alternative 2), as discussed in the 2011 GOA Final EIS/OEIS, remain the same for this Supplemental EIS/OEIS. The Navy conducted a review of existing federal and state regulations and standards relevant to water resources, as well as a review of new literature, to include laws, regulations, and publications pertaining to water resources. Although additional information relating to existing environmental conditions was found and is discussed in Section 3.3.1 (Affected Environment), the new information does not indicate an appreciable change to the existing environmental conditions as described in the 2011 GOA Final EIS/OEIS. Because the existing conditions have not changed appreciably, and no new Navy training activities are being proposed to occur in the TMAA in this Supplemental EIS/OEIS, re-analysis of the alternatives with respect to water resources is not warranted. Subsequently, the conclusions made for the alternatives analyzed in the 2011 GOA Final EIS/OEIS remain unchanged in this Supplemental EIS/OEIS.

3.3.3 CONCLUSION

As described above, there is new information on existing environmental conditions, including updated Navy regulations. However, this new information does not change the affected environment, which forms the environmental baseline of the water resources analysis in the 2011 GOA Final EIS/OEIS. Additionally, no new Navy training activities are being proposed in this Supplemental EIS/OEIS that would affect water resources in the TMAA. Therefore, conclusions for water resources impacts made for the alternatives analyzed in the 2011 GOA Final EIS/OEIS remain unchanged in this Supplemental EIS/OEIS. For a summary of effects of the No Action Alternative, Alternative 1, and Alternative 2 on water resources under both the National Environmental Policy Act and EO 12114, please refer to Table 3.3-16 (Summary of Effects by Alternative) in the 2011 GOA Final EIS/OEIS.

REFERENCES CITED AND CONSIDERED

Janout, M. A., T. J. Weingartner, T. C. Royer and S. L. Danielson. (2010). "On the nature of winter cooling and the recent temperature shift on the northern Gulf of Alaska shelf." Journal of Geophysical Research. 115(C5).

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