

ACRONYMS AND ABBREVIATIONS

(r_0)	charge radius	dB re 1 μ Pa	decibels referenced to 1 micropascal
μ g	micrograms(s)	dBa	A-weighted decibels
μ g/g	microgram(s)/gram	DBRC	Dabob Bay Range Complex
μ g/L	microgram(s) per liter	DDG	Destroyer
μ m	micrometer(s)	DDT	dichlorodiphenyltrichlorethane
μ Pa	micropascal(s)	DEIS	Draft Environmental Impact Statement
μ Pa ² -s	micropascal squared second(s)	DICASS	Directional Command Activated Sonobuoy
°	degrees	DLCD	Department of Land Conservation and Development
AASP	Acoustic Augmentation Support Program	DOC	Department of Commerce
AAW	Anti-Air Warfare	DoD	Department of Defense
ac.	acre(s)	DOE (Washington State)	Department of Ecology
ACM	Air Combat Maneuver	DOI	Department of Interior
ACMP	Alaska Coastal Management Program	DPS	Distinct Population Segments
ASUW	Anti-Surface Warfare	D_{Rm}	depth of receiver (animal) in meters
ASW	Anti-Submarine Warfare	DS	Doppler Sonar
ATBA	Area to Be Avoided	DT	Developmental Testing
ATCAA	Air Traffic Control Assigned Airspace	EEZ	Exclusive Economic Zone
ATN	Aid to Navigation	EFH	Essential Fish Habitat
AUTEC	Atlantic Undersea Test and Evaluation Center	EFHA	Essential Fish Habitat Assessment
AUV	Autonomous Underwater Vehicle	EIS	Environmental Impact Statement
AWOIS	Automated Wreck and Obstruction Information System	EL	Exposure Level
BA	Biological Assessment	EMATT	Expendable Mobile Anti-Submarine Warfare Training Target
BDU	Bomb Dummy Unit	EO	Executive Order
BOMBEX	Bombing Exercise	EOD	Explosive Ordnance Disposal
BRF	Behavioral Risk Function	ERL	effects range–low
BTS	Bureau of Transportation Statistics	ERM	effects range–median
C	Celsius	ESA	Endangered Species Act
CAA	Clean Air Act	EW	Electronic Warfare
CATM	Captive Air Training Missile	F	Fahrenheit
CCC	California Coastal Commission	FEIS	Final Environmental Impact Statement
CEE	Controlled Exposure Experiment	FFG	Frigate
C_{eHF}	High-Frequency Cetacean Weighting Function	FL	flight level
C_{eLF}	Low Frequency Cetacean Weighting Function	FR	Federal Register
C_{eMF}	Mid-Frequency Cetacean Weighting Function	FRR&DP	Fleet Readiness Research and Development Program
CEQ	Council on Environmental Quality	ft.	foot/feet
C.F.R.	Code of Federal Regulations	ft. ²	square foot/feet
CG	Cruiser	FTCA	Federal Tort Claims Act
CH ₄	methane	g	gram(s)
cm	centimeter(s)	G	gauss
CMP	Coastal Management Program	gal.	gallon(s)
CO	carbon monoxide	gC	gram(s) of carbon
CO ₂	carbon dioxide	GI	gastrointestinal
CO ₂ Eq	carbon dioxide equivalent	GUNEX	Gunnery Exercise
CV	Coefficient of Variation	h	depth
CWA	Clean Water Act	ha	hectare(s)
CZMA	Coastal Zone Management Act	HARM	High Speed Anti-Radiation Missile
CZMP	Coastal Zone Management Program	HDC (1)	High Duty Cycle
dB	decibel(s)		

HDC (2)	Harbor Defense Command	NBK	Naval Base Kitsap
HF	high-frequency	NEPA	National Environmental Policy Act
Hz	Hertz	NEPM	Non-explosive Practice Munition
IEER	Improved Extended Echo Ranging	NEW	Net Explosive Weight
i-ENCON	Incentivized Energy Conservation	NHPA	National Historic Preservation Act
IFR	Instrument Flight Rules	NKB	Naval Base Kitsap
in.	inch(es)	nm	nautical mile(s)
ISR	Intelligence, Surveillance, Reconnaissance	nm ²	square nautical mile(s)
kg	kilogram(s)	NMFS	National Marine Fisheries Service
kHz	kilohertz	NMML	National Marine Mammal Lab
km	kilometer(s)	NMSA	National Marine Sanctuaries Act
km ²	square kilometer(s)	NO	nitric oxide
L	liter(s)	NO ₂	nitrogen dioxide
lb.	pound(s)	NO _x	nitrogen oxides
LF	low-frequency	NOAA	National Oceanic and Atmospheric Administration
Lmax	maximum peak sound level	NOTAM	Notice to Airmen
LOA	Letter of Authorization	NRHP	National Register of Historic Places
m	meter(s)	NTM	Notice to Mariners
m ²	square meter(s)	NSWCCD	Naval Surface Warfare Center, Carderock Division
m ³	cubic meter(s)	NUWC	Naval Undersea Warfare Center
M	Acoustic Modems	NWTRC	Northwest Training Range Complex
MAC	Multistatic Active Coherent	NWTT	Northwest Training and Testing
MBTA	Migratory Bird Treaty Act	O ₃	ozone
MF	mid-frequency	OBIS-SEAMAP	Ocean Biogeographic Information System-Spatial Ecological Analysis of Megavertebrate
MFA	Mid-Frequency Active	OCE	Officer Conducting the Exercise
MFAS	Mid-Frequency Active Sonar	OCMP	Oregon Coastal Management Program
mg	milligram(s)	OCNMS	Olympic Coast National Marine Sanctuary
mg/L	milligram(s) per liter	OEIS	Overseas Environmental Impact Statement
mg chl/m ³	milligram(s) of chlorophyll per cubic meter	OPAREA	Operating Area
mi.	mile(s)	OT	Operational Testing
mi. ²	square mile(s)	oz.	ounce(s)
MINIROV	Miniature Remotely Operated Vehicle	P	Pinger
ml	milliliter(s)	Pa	Pascal
mm	millimeter(s)	Pb	lead
MMPA	Marine Mammal Protection Act	Pa-s	Pascal seconds
MOA	Military Operations Area	PACNW	Pacific Northwest
MPA (1)	Maritime Patrol Aircraft	PCAD	Population Consequences of Acoustic Disturbance
MPA (2)	Marine Protected Area	PCBs	polychlorinated biphenyls
msec	millisecond(s)	PCE	Primary Constituent Element
MSL	Mean Sea Level	PM	particulate matter
MW	Mine Warfare	PM ₁₀	PM ≤10 microns in diameter
MIW	Mine Warfare	PM _{2.5}	PM ≤2.5 microns in diameter
N	north	PMRF	Pacific Missile Range Facility
N ₂ O	nitrous oxide	P _O	Otariid Pinniped Weighting Function
N/A	not applicable	POPS	Project Operations
NAEMO	Navy Acoustic Effects Model	P _p	Phocid Pinniped Weighting Function
NAS	Naval Air Station	ppb	parts per billion
NASWI	Naval Air Station Whidbey Island	PRST	Post Refit Sea Trial
NAVAIR	Naval Air Systems Command		
NAVBASE	Naval Base		
NAVSEA	Naval Sea Systems Command		
Navy	United States Department of the Navy		

PSA	Post Shakedown Availability	UAS	Unmanned Aerial System
psi	pounds per square inch	UEWS	Underwater Emergency Warning System
PSNS&IMFINST	Puget Sound Naval Shipyard and Intermediate Maintenance Facility Instruction	U.S.	United States
PSU	Practical Salinity Units	U.S.C.	United States Code
PTS	permanent threshold shift	USCG	United States Coast Guard
QUTR	Quinault Underwater Tracking Range Site	USEPA	U.S. Environmental Protection Agency
R	Restricted Area	USFWS	U.S. Fish and Wildlife Service
RDT&E	Research, Development, Test and Evaluation	USV	Unmanned Surface Vehicle
RDX	royal demolition explosive	UUV	Unmanned Underwater Vehicle
re	referenced to	VDS	Variable Depth Sonar
RITA	Research and Innovative Technology Administration	VFR	Visual Flight Rules
RL	Received Level	VHF	Very High Frequency
rms	root mean square	VOC	volatile organic compounds
RMMV	Remote Multi-Mission Vehicle	W (1)	Warning Area
ROD	Record of Decision	W (2)	west
ROP	Range Operating Policies and Procedures Manual	yd.	yard(s)
ROV	Remotely Operated Vehicle		
S	south		
SAR	Stock Assessment Report		
SAS	Synthetic Aperture Sonar		
SCUBA	Self-Contained Underwater Breathing Apparatus		
SD	Swimmer Detection Sonar		
SDV	Seal Delivery Vehicle		
SEAFAC	Southeast Alaska Acoustic Measurement Facility		
SEAL	Sea, Air, Land		
sec	second(s)		
SEL	Sound Exposure Level		
SINKEX	Sinking Exercise		
SIP	State Implementation Plan		
SL	source level		
SO ₂	sulfur dioxide		
Sonar	Sound Navigation and Ranging		
SPL	Sound Pressure Level		
SPLASH	Structure of Populations, Levels of Abundance, and Status of Humpbacks		
SSN	Navy submarine		
Study Area	NWTT Study Area		
SUS	Signal Underwater Sound		
SWAG	Shock Wave Action Generator		
SWFSC	Southwest Fisheries Science Center		
Tg	tetragram(s)		
TL	transmission loss		
TNT	trinitrotoluene		
TOC	total organic carbon		
TORP	torpedoes		
TRACKEX	tracking exercise		
TTS	temporary threshold shift		
T-weighting	turtle-weighting		

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