

Fact Sheet Supporting the Marin County Resolution Opposing Use of Active Sonars in the Oceans

Seaflow is introducing this resolution as part of our public education and advocacy outreach to protect whales dolphins, fish and all marine life from high intensity active sonars and other sources of human-generated ocean noise pollution. We feel that Marin County can offer leadership in protecting its offshore marine life and its economy from the dangerous impacts of high intensity active sonar technology.

Background: Seaflow and Public Policy

In 2003, the Pew Oceans Commission issued a well-publicized report on the compromised health of our oceans (Pew 2003). The following year, the U.S. Commission on Ocean Policy issued their report confirming that our oceans are in crisis and that time is running out to reverse the damage (U.S. Commission on Ocean Policy 2004). In response to these reports, in October 2004, California Governor Arnold Schwarzenegger introduced “Protecting Our Ocean: California’s Action Strategy”, which will serve as the model for the other 22 coastal states that must soon draft their own ocean management plans (California Resources Agency and California Environmental Protection Agency 2004). The state plan, which establishes the California Ocean Protection Council, incorporates text drafted by Seaflow on ocean noise impacts (page 31). California is also taking a leadership role in Washington D.C. with Senator Barbara Boxer’s introduction of a comprehensive national Ocean Protection bill, which she drafted incorporating text on ocean noise contributed by Seaflow. (Seaflow: <http://www.seaflow.org>)

Since 1991, when the first cetacean mass stranding associated with military active sonar was identified (Simmond and Lopez-Jurado, 1991), a series of these mass strandings of whales and dolphins have been well documented in the literature (Van Dyke et al. 2004; IWC 2004; Hildebrand 2004; NRC 2003; Jepson et al. 2003; Balcomb and Claridge 2001, Frantiz 1998). Cetaceans can experience strandings, tissue damage, and temporary and permanent hearing threshold shifts when exposed to loud human-generated sound (Scott 2004; Richardson et al. 1995). Less obvious are changes in behavior, or “masking,” where sound prevents whales from communicating, mating, foraging or otherwise disrupts normal behavior which can have long term consequences for the survival of the species. The most serious potential impact is mortality (Van Dyke et al. 2004; IWC 2004; Jepson et al. 2003; NRC 2003; Balcomb and Claridge 2001).

The Noise Problem: Exponential increase in Human Generated Ocean Noise:

Thirty years ago, Dr. Donald Ross predicted that human generated noise would increase ten-fold by 2004 (*cf.* Ross 1993). His prediction was based on shipping noise, and has proved correct. What was not included in his prediction was the increase in other, more technological sources of noise – which are also increasing at an equally alarming rate. Due to technological advances, our oceans are now filled with many other human-generated, intensely loud and disturbing sounds. In addition to military sonars, other major sources of human-generated intense underwater noises are seismic airguns (used to prospect for offshore oil), and underwater telemetry. Many of these sources can be heard hundreds of miles away from their source. Low Frequency Active (LFA) sonar is loud enough to be heard over a

distance of 1000 miles. According to the Navy's own test results, high intensity active sonars can have harmful effects on humans who swim or dive in nearby waters (Dept. of the Navy 2001).

High intensity active sonars are used by the Navy (and some other countries' navies as well) for underwater communication and navigation, training and testing related to detection of enemy submarines in times of war or "heightened security". There exist more benign alternatives, such as "passive" sonar systems, which can perform the same functions while not doing harm to the marine ecosystem. "While passive sonar is designed to detect the sounds that other vessels produce, active systems generate their own sound waves and then decipher the echo they receive from distant targets. There is grave concern that proliferation of this technology poses a significant threat to marine mammals, fish and other ocean wildlife." (Environmentalists' Petition to NATO 2005: <http://www.oceannoisecoalition.org>)

After an injunction that greatly restricted the Navy's use of Low Frequency Active Sonar (except during times of war and "heightened security" when there are no restrictions), the Navy sought exemptions to the Marine Mammal Protection Act and the Endangered Species Act to circumvent these limitations (Wattercutter 2003). By attaching exemptions to the Department of Defense Appropriations Bill, the Navy was able to circumvent the court ruling (Dalton 2003; McClure 2003).

A growing body of scientific research confirms that the intense sounds produced by these active sonars can inflict a range of adverse effects on marine mammals. These effects include death and serious injury caused by lung hemorrhage or tissue trauma; strandings and beachings; temporary and permanent hearing loss; and disruption of feeding, breeding, nursing, communication and sensing, and other behaviors vital to the survival of these species. Similar concerns exist for potential impacts on other marine populations, especially species of fish. (National Resources Defense Council letter to NATO, Feb 2005: <http://www.nrdc.org>)

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As stated most recently by the Cetacean Specialist Group of the IUCN-World Conservation Union: "Military operations involving the use of high-intensity sonar, explosive devices, and other intense noise sources pose both lethal and sub-lethal threats to cetaceans." Of particular concern is "the development by several navies of very low-frequency sonars, known as 'LFA' in the United States, with detection ranges, and thus potential effect ranges, of several hundred kilometers." Similar concerns for military sonars and other noise pollution sources have been expressed by the International Whaling Commission (International Whaling Commission 2004) and several regional treaty bodies. LFA sonar use off the coast of Marin County is currently restricted due to a lawsuit brought by NRDC. However, the US Navy has appealed that decision.

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Public and scientific concern has grown, over the last decade, in the wake of a series of mass mortalities of cetaceans associated with the use of mid-frequency active sonar in coastal environments. The best-documented cases, where stranded animals were recovered in time for necropsy, occurred in the Bahamas (2000), Madeira (2000), and the Canary Islands (2002). Other incidents have occurred in Greece (1996), the U.S. Virgin Islands (1998, 1999), the Canary Islands (1985, 1986, 1989), and the Northwest coast of the United States (2003) (see NRDC website). More recently, active sonar has been linked to mass whale deaths in North Carolina (Environmental News Service, 2/1/05) and mass dolphin deaths in the Florida Keys (Associated Press, March 2005). However, the magnitude of the problem may be much greater since many cetaceans may die at sea where carcasses sink and are almost impossible to detect.

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High-intensity sound has been shown to have adverse impacts on other marine species as well. While research in this area is rudimentary, it has been demonstrated that some sources of sound have the potential to injure and kill and to significantly reduce catch rates of certain fish species at substantial distances. The proliferation of active sonar poses a threat to already depleted fish stocks throughout the world's oceans. Important research on the harmful effects of intense noise on fish was done by local biologist Dr. Robert Abbott of Strategic Environmental Consulting Inc. in conjunction with the pile driving noises created by the Richmond-San Rafael Bridge retrofit (Abbott & Reyff 2004). Additional studies are needed, but the current declines worldwide in fisheries may be caused in part by damage to fish populations from intense sources of human-caused noise.

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There is increasing concern worldwide about the growing use of intense active military sonars in the marine environment. The European Union passed a Resolution calling for a moratorium on the use of active sonar in 2004. "A petition seeking to curtail military use of high intensity active sonar has been submitted to NATO on behalf of the European Coalition for Silent Oceans with forty member organizations representing over 500,000 European citizens and on behalf of twenty-nine U.S., Canadian and international conservation and animal welfare organizations representing over 7,800,000 citizens. (Ocean Mammal Institute: <http://www.oceanmammalinst.org>)

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When Robert Kennedy, Jr. spoke at the Marin Center on March 4, 2005, he stated that, "in 100% of situations, good environmental policy is good economics". He also quoted President Teddy Roosevelt who said: "The most important role of government is to protect the environment for future generations."

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Marin County's Leadership Role:

Environmental experts who give presentations at the Environmental Forum of Marin continue to remind us that most important changes begin at the local level and eventually affect national policy. In passing this resolution, the Marin County Board of Supervisors can help lead the way to quiet our oceans and protect the web of life, while protecting the Marin County economy (tourism & fishing) and the Marin County coastal environment.

Similar resolutions have been passed by the City of Hilo the County of Maui and the City and County of San Francisco.

(See: <http://www.planetpuna.com/May%20Letter/MayLetter.htm> ,
<http://www.facesinnature.com/MCResolution.html> and
<http://temp.sfgov.org/sfenvironment/aboutus/policy/resolution/004-02.htm>)

While passing a resolution of international consequence may seem outside of the scope of local governance, the economic strength and quality of life in Marin County is dependant on the health of our environment. The costs associated with depleted fisheries (Pew 2003, USCOP 2004), the high clean-up costs, and the unwanted press attention due to whale strandings (Associated Press, March 2005) can be avoided if the people of Marin County recognize the growing threats of ocean noise pollution and act with sound policies limiting the increase of this growing problem in our local ocean environment.

Non-governmental Organizations that signed a Petition to the United Nations calling for action to restrict use of high intensity military sonars and other ocean noise pollution sources:

United States and Canadian Organizations

Acoustic Ecology Institute
Americans for a Safe Future
American Cetacean Society
American Society for the Prevention of Cruelty to Animals (ASPCA)
Animal Welfare Institute
Blue Waters Kayaking
Center for Biological Diversity
Cetacean Society International
Defenders of Wildlife
Dolphin Connection
Earth Island Institute
Earth Neighborhood Wellness Center
Earthtrust
ECO-Link
Greenpeace International
Humane Society of the US
International Marine Mammal Project
Natural Resources Defense Council
Ocean Mammal Institute
San Diego Environmental Health Coalition
Seaflo
Sierra Club US and Canada
Stop LFAS Worldwide Network
Whaleman Foundation

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European and Middle Eastern Organizations

Aargauer Tierschutz, Switzerland
Animalisti Italiani, Italy
ASMS OceanCare, Switzerland
Dauphin Libres et Captifs, Belgium
Delphin Institut Freiburg, Germany
DELPHIS Mediterranean Dolphin Conservation, Italy
Die Welt der Wale und Delfine, Germany
ECCEA, France and Martinique
Environmental Investigation Agency, United Kingdom
Fair-Fish, Switzerland
Finns for the Whales Society, Finland
FIRMM, Switzerland and Spain □
Gesellschaft zur Rettung der Delphine, Germany
Gesellschaft zum Schutz der Meeressäuger, Germany
Hai Stiftung, Switzerland
IMMRAC (Israeli Marine Mammal Research and Assistance Center), Israel
Institut für Aquatische Körperarbeit, Switzerland

Korte PHI, Germany
La Baleine Libre, Belgium
Liquid Sound, Germany
Marine Connection, United Kingdom
M.E.E.R, Germany and Spain
Morigenos - marine mammal research and conservation society, Slovenia
Natur im Bild, Germany
PADI PROJECT AWARE, Europe
PROWILDLIFE, Germany
Réseau-Cétacés, France
Schweizer Tierschutz, Switzerland
Schweizer Wal-Gesellschaft, Switzerland
Shark Info, Switzerland
SHARKPROJECT, Germany
Swiss Cetacean Society, Switzerland
Swiss Coalition for the Protection of Whales (SCPW), Switzerland
SOS Grand Bleu, France
Stiftung Caretakers, Switzerland
Tethys Research Institute, Italy
Tierschutz Bund, Switzerland
Tortugas, Switzerland
VETO (Verband Tierschutzorganisationen Schweiz), Switzerland
Vier Pfoten, Austria
Vier Pfoten, Switzerland
Vier Pfoten, Germany
Vier Pfoten, Rumania
Vier Pfoten, Bulgaria
WDCS, Whale and Dolphin Conservation Society, UK and Germany
WWF Schweiz, Switzerland

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Note:

European Parliament Resolution link: http://www.seaflow.org/downloads/EP_Resolution_FINAL.pdf