MBNMS Permit Report

October 11, 2012

MULTI-2012-004 -

Effective Date: 09/14/2012 **Expiration Date:** 09/30/2014

Project Title: Wave Glider Operations: Conducting Marine Research

Applicant Name: Mr. John Appelgren

Affiliation: Liquid Robotics Inc.

Project Summary:

Liquid Robotics, Inc. (LRI) Wave Gliders are remotely operated, propelled under their own power, remotely attended from the Wave Glider Operations Center, moving at speeds of ~1 knot and designed to "lose" in any type of collision with any vessel. The Wave Glider unit is composed of a submerged glider with rudder and wings (sub; 75 inches x 24 inches), umbilical (up to 20 feet) leading to surface float (82 inches x 24 inches, surfboard size), solar panels, marker light, antenna, and mast extending 3 feet above the water surface supporting a flag (http://liquidr.com/technology/wave-glider-specifications/).

The Wave Glider's unique two-part architecture exploits this difference in motion to provide forward thrust. A rising wave lifts the float, causing the tethered sub to rise. The articulated wings on the sub are pressed down and the upward motion of the sub becomes an up-and-forward motion, in turn pulling the float forward and off the wave. This causes the sub to drop, the wings

Latest Event:

09/17/2012 Permit signed copy received

MULTI-2009-005-A4

Effective Date: 09/01/2012 **Expiration Date:** 08/31/2013

Project Title: Ecology and population dynamics of white sharks in the northeastern Pacific

Applicant Name: Dr. Barbara Block

Affiliation: Stanford University

Project Summary:

The Tagging of Pacific Predators (TOPP) project has been conducting white shark research in the Monterey Bay and Gulf of the Farallones National Marine Sanctuaries (sanctuaries) since 2005. The main objectives of TOPP's white shark research has been to: 1) determine population size and trajectory, 2) determine essential habitat, migration patterns and ecological niche, 3) investigate the physiological and environmental determinants of the white shark niche, and 4)

examine the genetic structure of the northeastern Pacific population. The research has involved tagging white sharks and tracking their movements locally and regionally.

Dr. Barbara Block has requested to continue white shark research past expiry of permit MULTI-2009-005-A3 on August 31, 2012. The original permit which covered three white seasons between 2009 and 2011 allowed for 80 acoustic tags to be deployed (a total of 45 were deployed), 20 pop-up or PAT satellite tags (4 were deployed), 100biopsies (45 samples were

Latest Event:

08/17/2012 Additional information requested

MBNMS-2012-032

Effective Date: 10/22/2012 **Expiration Date:** 04/15/2013

Project Title: Installation, Repair, and Removal of Water Level Stations in California (CO-OPS TASK 12-04)

Applicant Name: Mr. Michael Zieserl

Affiliation: JOA Surveys, LLC

Project Summary:

NOAA's Center for Operational Oceanographic Products and Services (CO-OPS) will be conducting a tide and sea level study in California late Oct 2012 - March 2013. The project is part of the nationwide NOAA VDATUM program (http://vdatum.noaa.gov/). The tide data will be used to support nautical charting, shoreline mapping, and surveying for projects that require accurate vertical heights near the water.

A temporary NOAA tide station will be installed at Pacific Valley (north of Sand Dollar Beach) along the coast of Los Padres National Forest in California. The temporary tide station will measure accurate water levels for 3 months using precise pressure sensors. NOAA/CO-OPS will calculate tidal datums and harmonic constituents based upon this data.

The data gathered there will enhance marine navigation as well as vertical datum models, coastal planning and management, long-term sea-level assessments, and emergency preparedness. JOA Survey, LLC (JOA) under contract to NOAA/CO-

Latest Event:

10/10/2012 Application deemed complete

MBNMS-2012-031 -

Effective Date: 10/03/2012 **Expiration Date:** 10/30/2017

Project Title: Monte Foundation Annual Fireworks

Applicant Name: Mr. Marcus Monte

Affiliation: Rudolph F. Monte Foundation

Project Summary:

This event is scheduled to take place in October at Seacliff State Beach.
This authorization is limited to discharges and incidental harassment of marine life within the MBNMS by the launching of commercial within the Sanctuary in October of each year that this authorization is valid. The Aptos site has been used annually for a large fundraiser for Aptos area schools in October. The launch site is on the Aptos Pier and part of a grounded cement barge at Seacliff State Beach. The aerial shells are aimed above and to the south of the pier.

Latest Event:

10/02/2012 Authorization issued

MBNMS-2012-030 -

Effective Date: 10/05/2012 **Expiration Date:** 11/30/2014

Project Title: Environmental signal analysis: monitoring the impacts of climate change on rocky intertidal ecosystems across a cascade of scales

Applicant Name: Ms. Allison Matzelle

Affiliation: University of South Carolina

Project Summary:

Applicant proposes to install and remove temperature data loggers onto rock within mussel beds at Piedras Blancas to investigate the ongoing and future impacts of climate change on predator-prey interactions between seastar Pisaster and mussel Mytilus.

Approximately six data loggers (1.2 x 1.6 x 0.68 inches) will be deployed within various intertidal mussel beds below the Mean High Water mark and above the Mean Low Water mark during low tide. ONSET TidBit v2 Temperature Data Loggers will be encased in black-tinted Evercoat Marine Resin. Z-Spar Splash Zone Epoxy

Putty will be used to attach the loggers to rock. Rock will be cleared (if necessary) using hand tools (e.g., hammer, screw driver). Loggers will be attached at previously attached locations. In 10-12 months, applicant will return to remove loggers and re-deploy new ones. No equipment will be left in the field or permanently secured to any rock or natural surface.

Black abalone will not be removed, and logger attachme

Latest Event:

10/04/2012 Permit signed copy received

MBNMS-2012-029 -

Effective Date: 10/01/2012 **Expiration Date:** 01/31/2014

Project Title: Passive acoustic monitoring of harbor porpoise off south-central California before, during, and after seismic surveys

Applicant Name: Dr. Karin Forney

Affiliation: NOAA Southwest Fisheries Science Center

Project Summary:

Applicant proposes to install and remove approximately two moored passive acoustic listening stations (C-PODS) in the southern region of the sanctuary (just south of Point Piedras Blancas, and between Cape San Martin and Point Sur).

The purpose of this project is to monitor the distribution of cetaceans, with particular emphasis on the harbor porpoise (Phocoena phocoena), before, during, and after seismic survey work to be conducted in the Diablo Canyon area off central California by Pacific Gas & Electric (PG&E), as authorized under the Marine Mammal Protection Act (MMPA) and Endangered Species Act (ESA). The overarching goal is to provide appropriate information for the National Marine Fisheries Service (NMFS), the U.S. Fish and Wildlife Service (USFWS), the California Department of Fish and Game (CDFG), and other agencies to assess the impacts of the seismic survey work. The planned seismic operations include a large portion of the core range of the Morro Bay harbor porpoise

Latest Event:

09/27/2012 Permit issued

MBNMS-2012-028 -

Effective Date: 10/01/2012 **Expiration Date:** 10/31/2014

Project Title: Discovery of Marine Natural Products from Marine Sediments

Applicant Name: Dr. Roger Linington

Affiliation: University of California Santa Cruz

Project Summary:

Applicant proposes to collect marine sediments using hand-held corers while SCUBA diving.

During a two-year period, approximately 40 sites will be visited, to collect ten (2 x 5-gram) samples from each site. This research project is part of a larger effort in Linington's laboratory to explore marine actinomycetes (marine bacteria) for bioactive secondary metabolites, and to apply these secondary metabolites to human health targets for discovering new leads for drug development. In the context of MBNMS, this project involves collection of small quantities of

sediment, isolation of actinomycetes from these sediment samples, and identifying both the taxonomic grouping and chemical composition of these bacterial isolates. Although compounds may have biomedical applications, project is short-lived, small-scale, and not for commercial purposes.

Latest Event:
10/01/2012 Permit signed copy received

MBNMS-2012-027 -

Effective Date: 09/01/2012 **Expiration Date:** 12/30/2014

Project Title: In situ surveys of fishes using a video lander

Applicant Name: Dr. Richard Starr

Affiliation: Moss Landing Marine Laboratories

Project Summary:

In collaboration with fishermen, scientists, and fisheries managers, Drs. Rick Starr (Moss Landing Marine Laboratories) and Mary Gleason (The Nature Conservancy) plan to use a drop stereo video camera lander system to survey fishes off central California. In 2012, they will test video survey methods using the drop camera, encased in a "video lander." The system has been successful for other groundfish research off Oregon and Washington. In 2013 and 2014, they will conduct visual surveys of sites using the video lander to assess habitat, species abundances, and sizes of fishes in and around the rockfish conservation areas (RCAs). The camera system will be used to ground truth habitat maps where overfished species are predicted to occur and not occur. The survey will extend along the central California coast in approximately 25-300 meters water depth, focusing on the rockfish conservation areas (RCAs) at 100-250 meters. A video camera system will be deployed over the side

Latest Event:
08/28/2012 Permit issued

MBNMS-2012-026 -

Effective Date: 10/01/2012 **Expiration Date:** 10/01/2014

Project Title: Repair and Maintenance of seawater intake and outlet pipeline system

Applicant Name: Ms. Barbara Meister

Affiliation: Monterey Bay Aquarium

Project Summary:

The CA Coastal Commission approved CDP Waiver 3-12-028W for this project on August 10, 2012. The approval involves reparis to the primary seawater intake pipeline including placement of concrete cement sacks in an interlocking pattern directly beneath suspended portions of 29 of the existing pipeline footings, the majority of which are located in 30-feet or less of water and within 400-feet of the shoreline. The proposal also includes renovations / reparis to the Monterey Bay Aquarium cafe and restaurant and sea otter tank exhibit, which will require the use of a portion of the Hovden Way overlook for construction staging and access. The renovations and repairs will take place entirely within the existing aquarium building at 886 Cannery Row.

Latest Event:

08/22/2012 Authorization issued

MBNMS-2012-024

Effective Date: **Expiration Date:**

Project Title: USACE Emergency dredging project at Moss Landing Harbor Federal Channel

Affiliation/ Applicant Name: US Army Corps of Engineers

Project Summary:

The proposed dredging would restore safe navigation in the in Moss Landing Harbor's Entrance Channel, which has shoaled to approximately 8.6 feet MLLW. Approximately 12,600 cubic yards of sediment would be dredged from the Entrance Channel by the federal hopper dredge Yaquina. Per USEPA's instance, sediment would be placed at the designated SF-14 placement site. Dredging would commence on or about August 15 and persist for 5 days.

Latest Event:

08/15/2012 Permit not required

MBNMS-2012-023 -

Effective Date: 08/17/2012 **Expiration Date:** 10/31/2013

Project Title: The effects of settlement timing on competition in juvenile rockfishes

Applicant Name: Mr. Christian Denney

Affiliation: Moss Landing Marine Laboratories

Project Summary:

Competition is an important ecological principle controlling populations and even driving evolution. Young-of-the-year rockfishes settle out of the plankton to near shore habitats at different times of the year based on timing of parturition and oceanographic conditions. After settlement, several species coexist in high densities in nearshore environments. Competition during this post settlement life stage has been relatively unstudied. Applicant will perform a set of manipulative field experiments to explore the impact of rockfish settlement timing on competition during the first few months after settlement. Applicant will collect juvenile rockfishes using moored Standard Monitoring Unit for Recruitment of Fishes (SMURF), and transplant them to small cages attached to kelp plants. Experiments will put juvenile rockfishes of different ages and different species in competition and then monitor rates of growth and survival. Diet and trophic level will be examined by using gut content

Latest Event:
08/21/2012 Permit signed copy received

MBNMS-2012-020 -

Effective Date: 10/12/2012 **Expiration Date:** 10/12/2017

Project Title: City of Scotts Valley ORDER NO. R3-2012-0029, Wastewater Treatment Facility NPDES NO. CA0048828

Affiliation: Central Coast Regional Water Quality Control Board

Project Summary:
The Facility discharges wastewater to the Pacific Ocean (via Monterey Bay), a water of the United States, and is currently regulated by Order R3-2007-0013, which was adopted on September 7, 2007 and expires on October 27, 2012. The terms and conditions of the current Order will be automatically continued and remain in effect until new Waste Discharge Requirements and a National Pollutant Discharge Elimination System (NPDES) permit are adopted pursuant to this Order.

Latest Event:
10/12/2012 Approval granted by other agency

MBNMS-2012-017 -

Effective Date: 08/01/2012 **Expiration Date:** 08/31/2012

Project Title: Fine scale foraging behavior of humpback whales in Monterey Bay, California

Applicant Name: Dr. John Calambokidis

Affiliation: Cascadia Research Collective

Project Summary:

This project aims to improve our understanding of the underwater foraging behavior of humpback whales in Monterey Bay, while providing valuable insight into factors that lead to aggregations of foraging whales that may leave them vulnerable to ship strikes and vessel disturbance. Applicant will use advanced digital recording tags (Dtags) to document the fine scale underwater movements of whales, scientific echosounders to sample prey near a foraging whale, and net tows to ground truth acoustic data. The objectives of this research are to (1) quantify the effects of environmental processes, prey type, and prey patch characteristics on the fine scale foraging movements of humpback whales, and (2) determine the prevalence of individual foraging specializations in humpback whales and the extent to which prey characteristics influence these behaviors.Specifically, the research includes the following the components: 1) Deploy suction-cup attached tags on humpback whales (and blue

Latest Event:

08/08/2012 Permit signed copy received

MBNMS-2011-028 -

Effective Date: 04/24/2012 **Expiration Date:** 04/30/2017

Project Title: Dredge disposal from Santa Cruz Harbor

Applicant Name: n/a Santa Cruz Harbor

Project Summary:

The Santa Cruz Port District has applied for a ten-year

USACE permit to maintenance dredge Santa Cruz Harbor. The applicant is proposing to dredge a maximum of 3,110,000 cubic yards (cys) during the next ten years. The California Coastal Commission (CCC) Proposed Coastal Development Permit Waiver 3-10-023 is essentially a renewal of a five-year dredging permit to allow: 1) dredging of up to 1,280,000 cubic yards of entrance channel sediment (>80% sand) over the next five years with disposal into the nearshore environment, into the surf line, and on the dry beach at Harbor Beach/Twin Lakes State Beach;

2) dredging of up to 20,000 cubic yards of clean inner harbor sandy sediment (>80% sand) or up to 10,000 cubic yards per year of silts/clays (<80% sand) and 10,000 cubic yards/year of sandy sediment (>80% sand), at a rate of not more than 550 cubic yards of silts and clay per day, with disposal into the nearshore environment; 3) dredging of up to 35,000 cubic yards of inner harbor mat'l

Latest Event:

09/21/2012 Authorization issued